SIAM
Security Impact Assessment Measures

Deliverable 12.1

The SIAM AST guidelines

The Consortium

Project number
261826

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Funding scheme
Collaborative Project

The SIAM AST guidelines consist out of three phases in the project that resulted in two different parts of this deliverable.

The aim of the guidelines part in this project was to develop the tool from a solely functioning one to a user friendly one. In the development phase of the tool, various dummies and designs were built and tested. Tests were conducted with colleagues that have not been involved in the development and in the user fora.

In the end the tool became self explaining by implementing easy understandable "Help bubbles". These bubbles will guide the user in the case of being lost. Fortunately the consortiums' aim was to have a very slim design that uses words that are easy to understand, even for non-native English speakers.

For this deliverable we decided to create a step-by-step guideline based on screenshots.

However, the second part is the administration part of the tool that normally is not being screened to common users of the AST but rather for the IT department. The "SIAM Administration console" explains how to prepare the AST infrastructure for its usage.

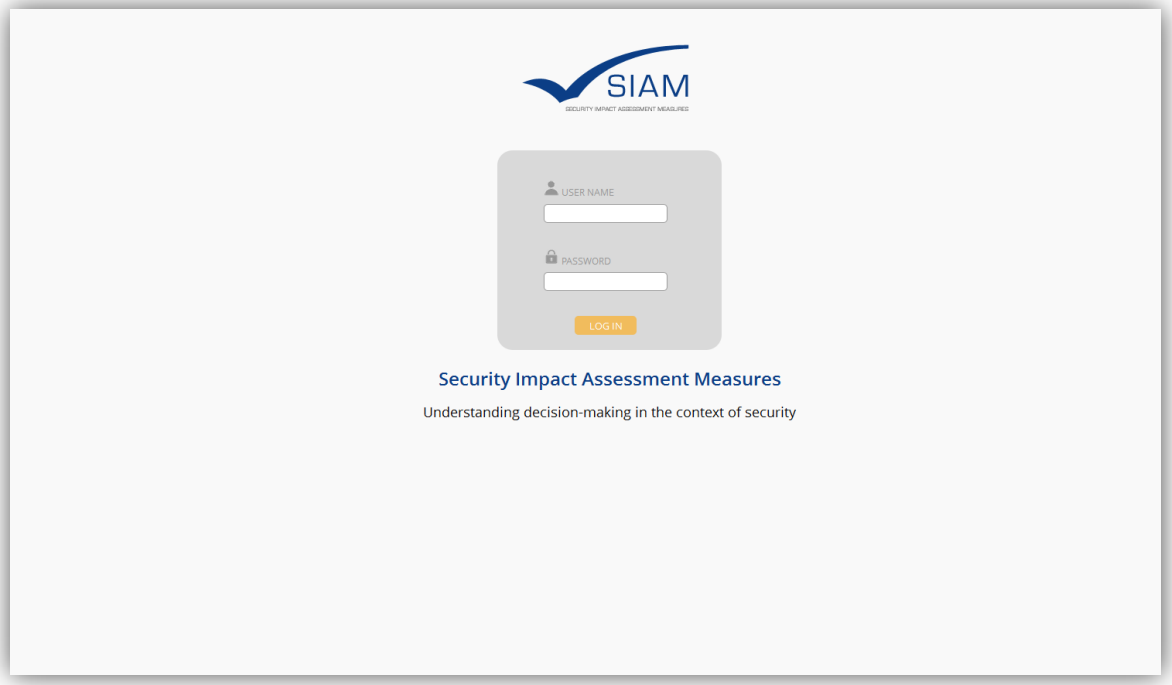
Additionally, Kingston University also prepared various video tutorials, explaining the system step-by-step.

https://www.youtube.com/playlist?list=PLDMjco4x4wUd_RAazIAriKfS9QA1kxU7f

Security Impact Assessment Tool (AST)

Guidelines – User Manual

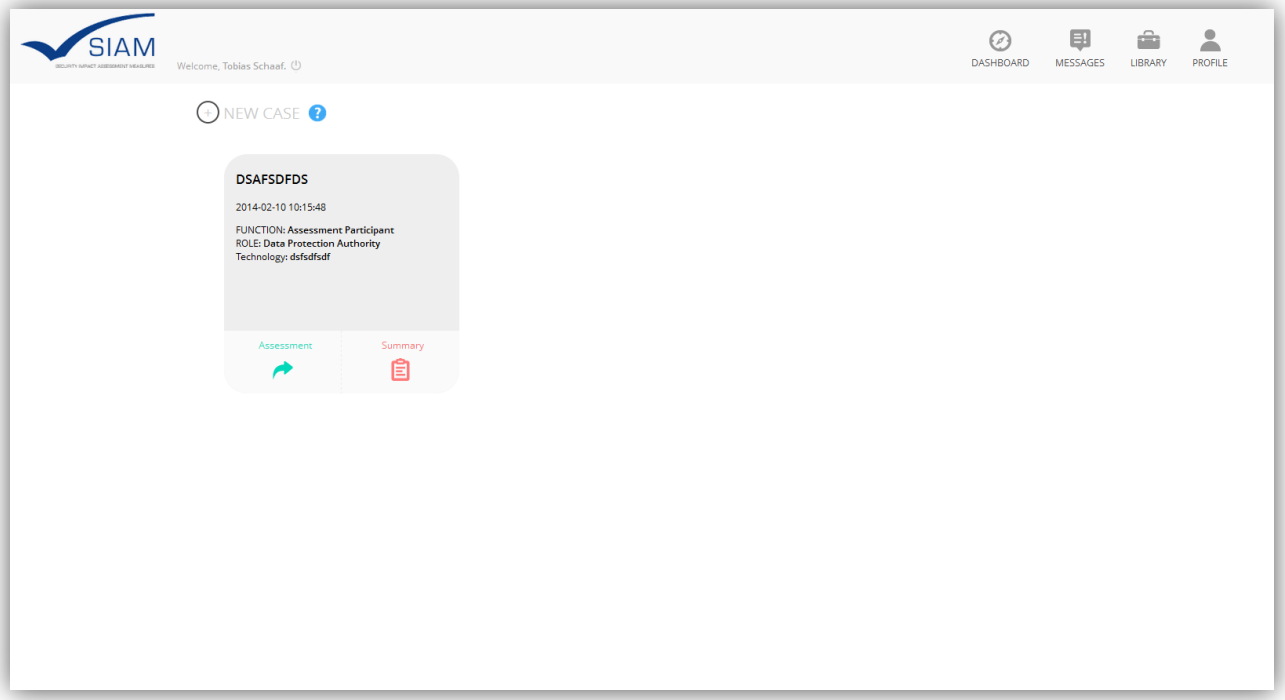
The Log-In



This is the Log-In-Screen:

Here you have to log in with the account that has been given to you by the administrator.

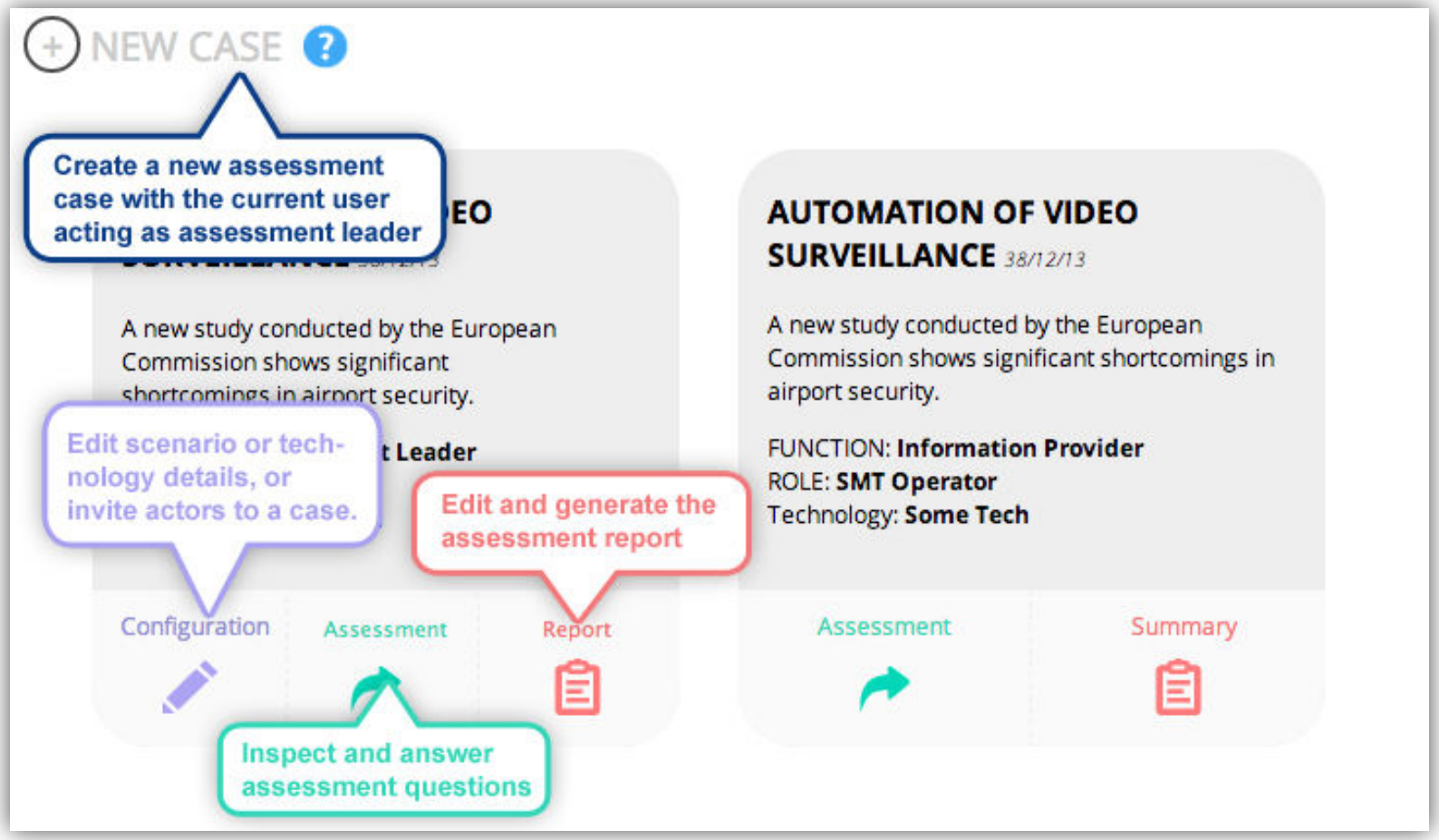
The Dashboard



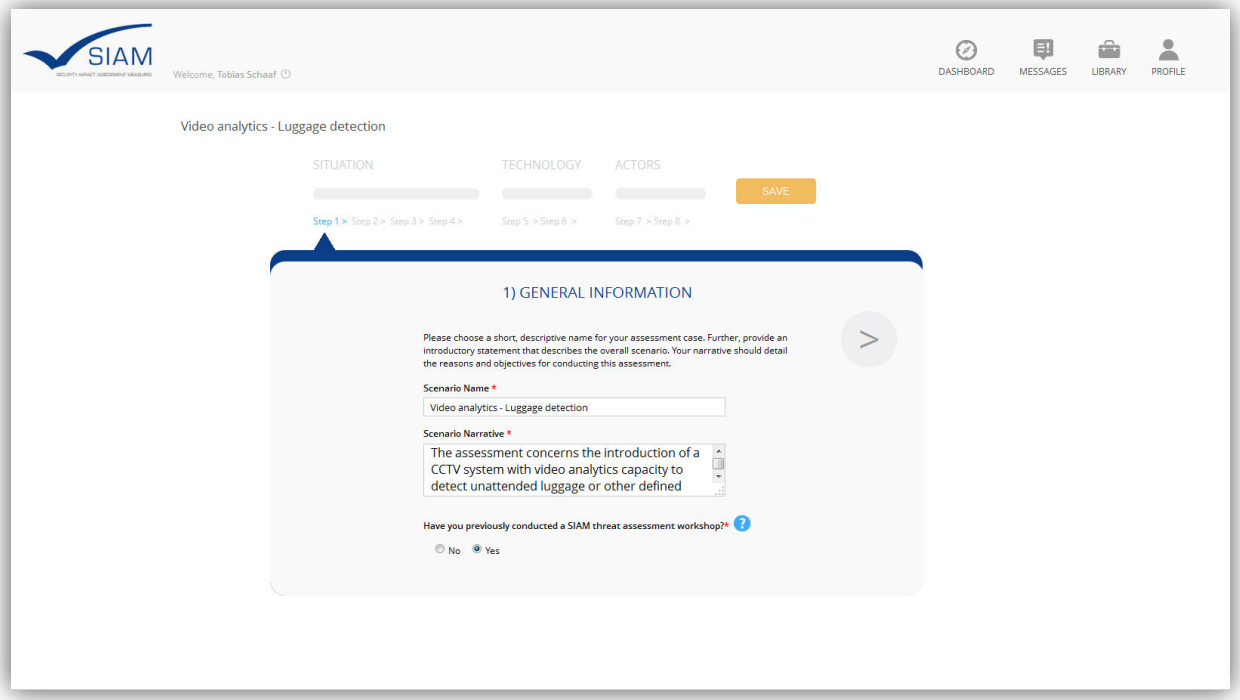
This is the Assessment Dashboard.

It contains all assessment cases that you are participating in or are invited to observe.

The Dashboard


NEW CASE
Create a new assessment case with the current user acting as assessment leader
AUTOMATION OF VIDEO SURVEILLANCE 38/12/13
A new study conducted by the European Commission shows significant shortcomings in airport security.
FUNCTION: Information Provider
ROLE: SMT Operator
Technology: Some Tech
Edit scenario or tech-nology details, or invite actors to a case.
Edit and generate the assessment report
Configuration
Assessment
Report
Assessment
Summary
Inspect and answer assessment questions

Creating a new assessment case


SIAM
Welcome, Tobias Schaaf
DASHBOARD
MESSAGES
LIBRARY
PROFILE
Video analytics - Luggage detection
SITUATION
TECHNOLOGY
ACTORS
SAVE
Step 1 > Step 2 > Step 3 > Step 4 >
Step 5 > Step 6 >
Step 7 > Step 8 >
1) GENERAL INFORMATION
Please choose a short, descriptive name for your assessment case. Further, provide an introductory statement that describes the overall scenario. Your narrative should detail the reasons and objectives for conducting this assessment.
Scenario Name *
Video analytics - Luggage detection
Scenario Narrative *
The assessment concerns the introduction of a CCTV system with video analytics capacity to detect unattended luggage or other defined
Have you previously conducted a SIAM threat assessment workshop?*
No
Yes

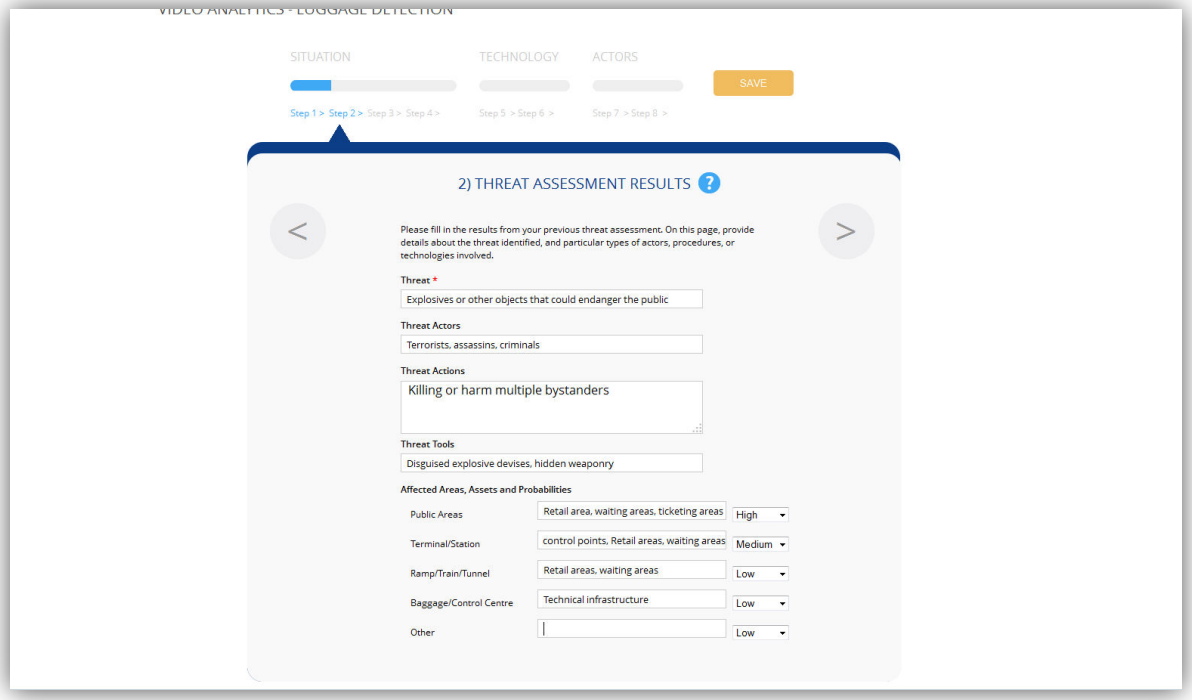
The general overview screen is asking you for a scenario name. This will be the overall title of this case and will be referred to the whole process.

The scenario narrative should contain the reason for this assessment case. It will present any participant or observer with a short background of this assessment.

NOTE: The narrative will have only descriptive purpose and does not have any impact on the assessment process.

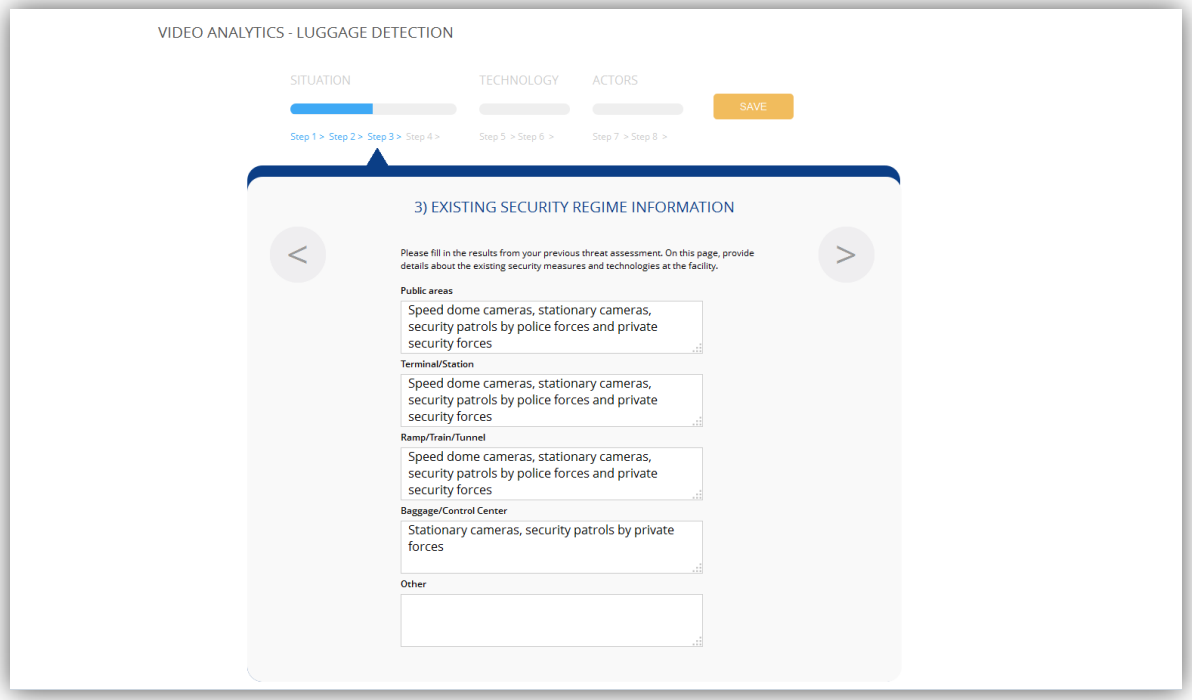
If you have not conducted a threat assessment you can whether choose to skip further situation description by clicking „no“ or you can use the toolkit to conduct a threat assessment.

Creating a new assessment case



The threat assessment is following the methodology developed in the SIAM project. The exact methodology can be found in the toolkit of the SIAM AST.

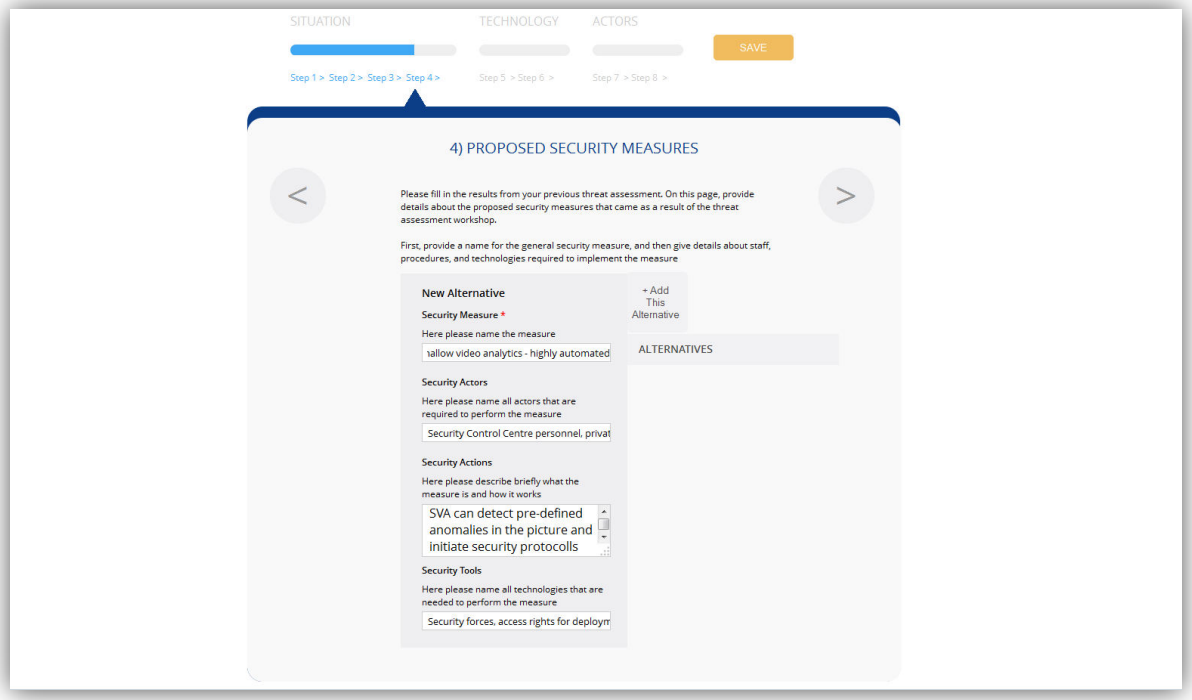
Creating a new assessment case


VIDEO ANALYTICS - LUGGAGE DETECTION
SITUATION
TECHNOLOGY
ACTORS
SAVE
Step 1 > Step 2 > Step 3 > Step 4 >
Step 5 > Step 6 >
Step 7 > Step 8 >
3) EXISTING SECURITY REGIME INFORMATION
Please fill in the results from your previous threat assessment. On this page, provide details about the existing security measures and technologies at the facility.
Public areas
Speed dome cameras, stationary cameras, security patrols by police forces and private security forces
Terminal/Station
Speed dome cameras, stationary cameras, security patrols by police forces and private security forces
Ramp/Train/Tunnel
Speed dome cameras, stationary cameras, security patrols by police forces and private security forces
Baggage/Control Center
Stationary cameras, security patrols by private forces
Other

This step shall give a short overview of the existing security technologies and measures that are already in place.

Its‘ purpose is it to enable participants to assess the situation better especially if they might not know the site properly.

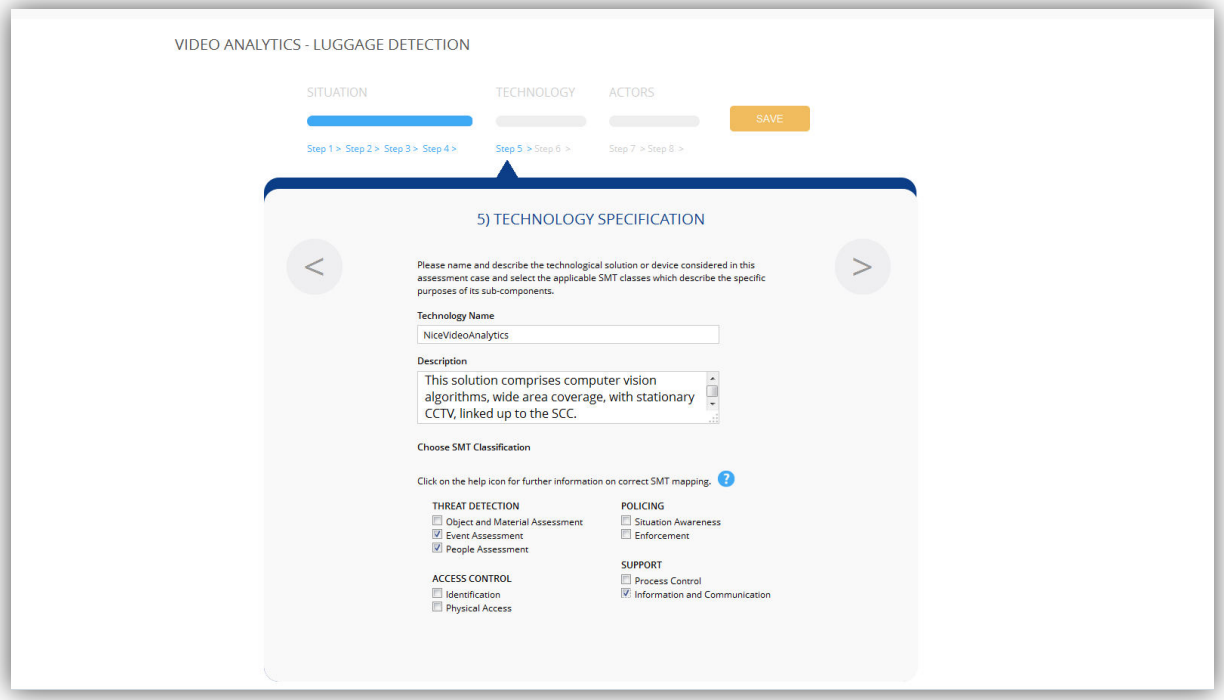
Creating a new assessment case


SITUATION
TECHNOLOGY
ACTORS
SAVE
Step 1 > Step 2 > Step 3 > Step 4 >
Step 5 > Step 6 >
Step 7 > Step 8 >
4) PROPOSED SECURITY MEASURES
Please fill in the results from your previous threat assessment. On this page, provide details about the proposed security measures that came as a result of the threat assessment workshop.
First, provide a name for the general security measure, and then give details about staff, procedures, and technologies required to implement the measure
New Alternative
+ Add This Alternative
Security Measure *
Here please name the measure
allow video analytics - highly automated
ALTERNATIVES
Security Actors
Here please name all actors that are required to perform the measure
Security Control Centre personnel, privat
Security Actions
Here please describe briefly what the measure is and how it works
SVA can detect pre-defined anomalies in the picture and initiate security protocolls
Security Tools
Here please name all technologies that are needed to perform the measure
Security forces, access rights for deploym

Here the entirely SMT shall be described to enable participants to have a brought understanding of the idea behind this SMT.

It shall also explain what technologies and personnell is needed to operate the SMT. Also it shall describe how the SMT is going to work in the sites‘ context.

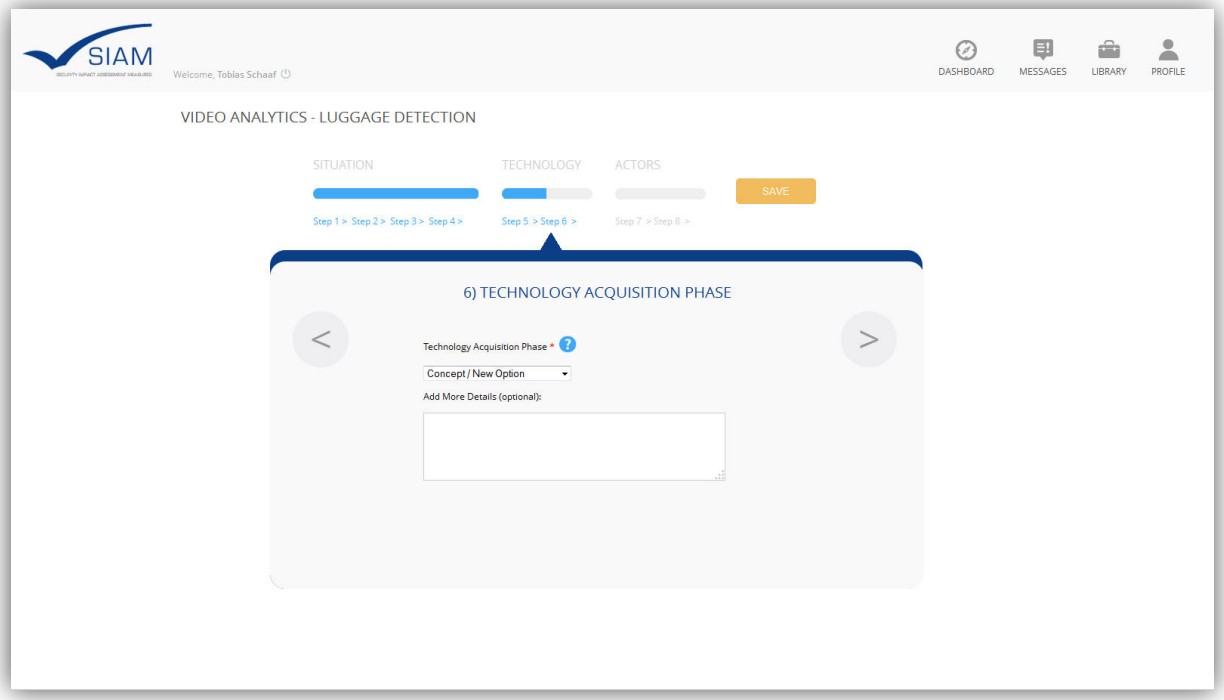
Creating a new assessment case


VIDEO ANALYTICS - LUGGAGE DETECTION
SITUATION
TECHNOLOGY
ACTORS
SAVE
Step 1 > Step 2 > Step 3 > Step 4 >
Step 5 > Step 6 >
Step 7 > Step 8 >
5) TECHNOLOGY SPECIFICATION
Please name and describe the technological solution or device considered in this assessment case and select the applicable SMT classes which describe the specific purposes of its sub-components.
Technology Name
NiceVideoAnalytics
Description
This solution comprises computer vision algorithms, wide area coverage, with stationary CCTV, linked up to the SCC.
Choose SMT Classification
Click on the help icon for further information on correct SMT mapping.
THREAT DETECTION
Object and Material Assessment
Event Assessment
People Assessment
POLICING
Situation Awareness
Enforcement
SUPPORT
Process Control
Information and Communication
ACCESS CONTROL
Identification
Physical Access

At stage 5, the technology that will be assessed has to be specified. Here it is essential to pick the adequate SMT classifications. The number of classes will determine the questions that will be proposed to whom.

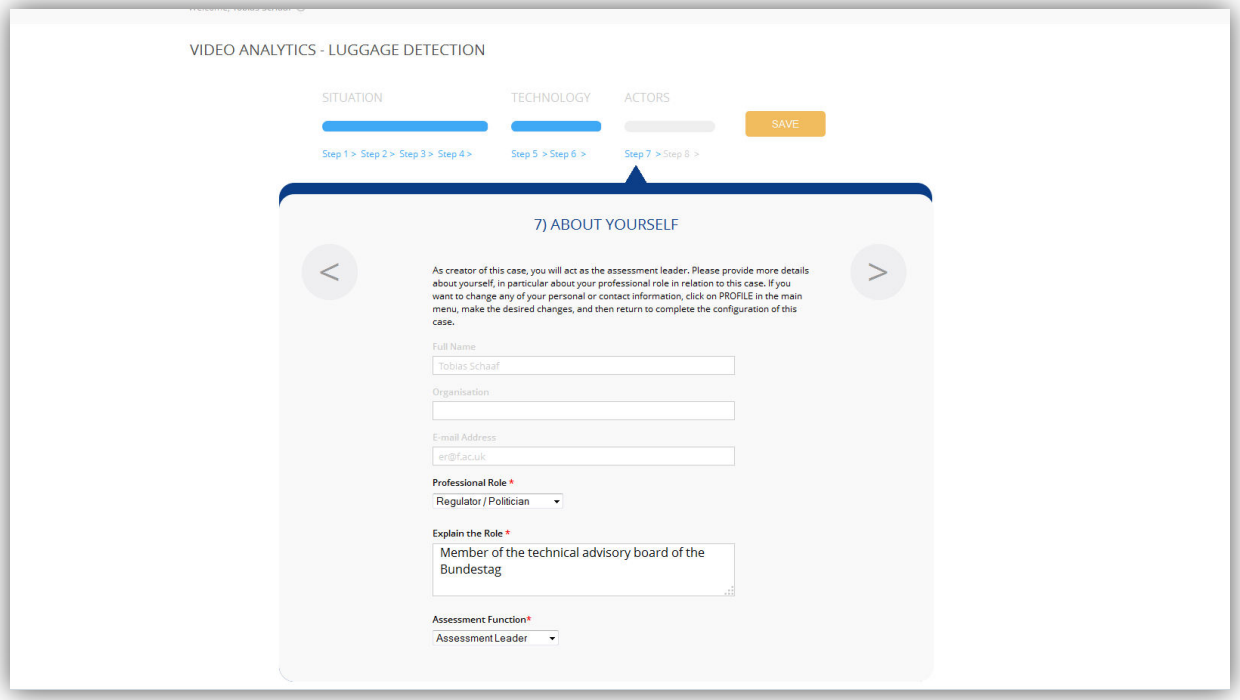
Please consider the carefully and use the help button for detailed information about the classifications.

Creating a new assessment case



The AST is defaulted at the „concept/new option“ phase. In a later stage this can be extended to another phase of technology acqusition processes.

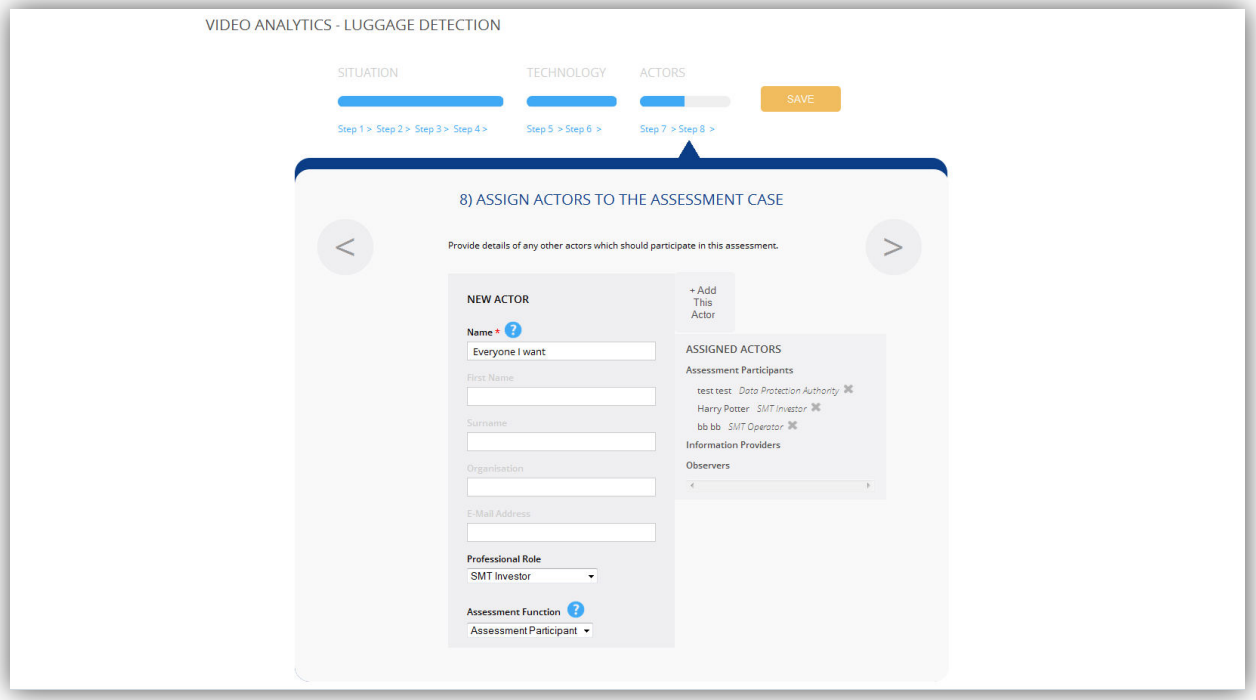
Creating a new assessment case


VIDEO ANALYTICS - LUGGAGE DETECTION
SITUATION
TECHNOLOGY
ACTORS
SAVE
Step 1 > Step 2 > Step 3 > Step 4 >
Step 5 > Step 6 >
Step 7 > Step 8 >
7) ABOUT YOURSELF
As creator of this case, you will act as the assessment leader. Please provide more details about yourself, in particular about your professional role in relation to this case. If you want to change any of your personal or contact information, click on PROFILE in the main menu, make the desired changes, and then return to complete the configuration of this case.
Full Name
Tobias Schaaf
Organisation
E-mail Address
er@f.ac.uk
Professional Role *
Regulator / Politician
Explain the Role *
Member of the technical advisory board of the Bundestag
Assessment Function*
Assessment Leader

The actors section is about the participants of the assessment case.

The first step requires you to introduce yourself to the other actors. Since you are the leader you should give some background information, especially if you will invite external persons who may not know you.

Creating a new assessment case

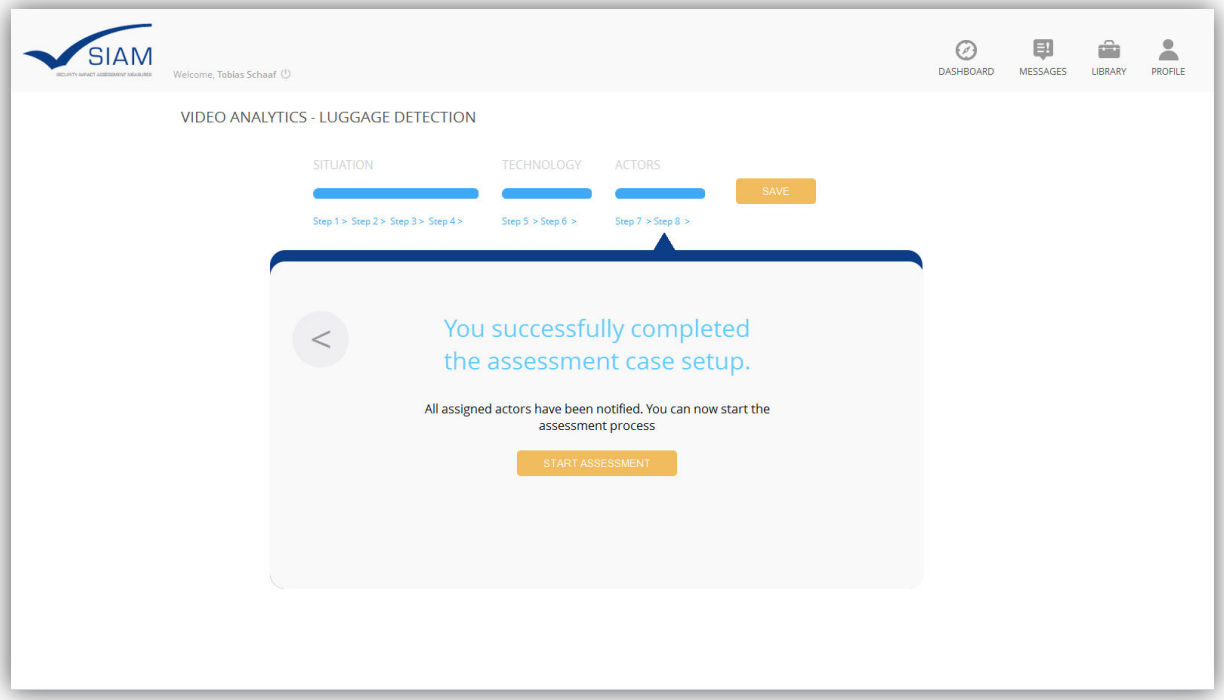


Here you must introduce the first round of actors you want to participate in the case.

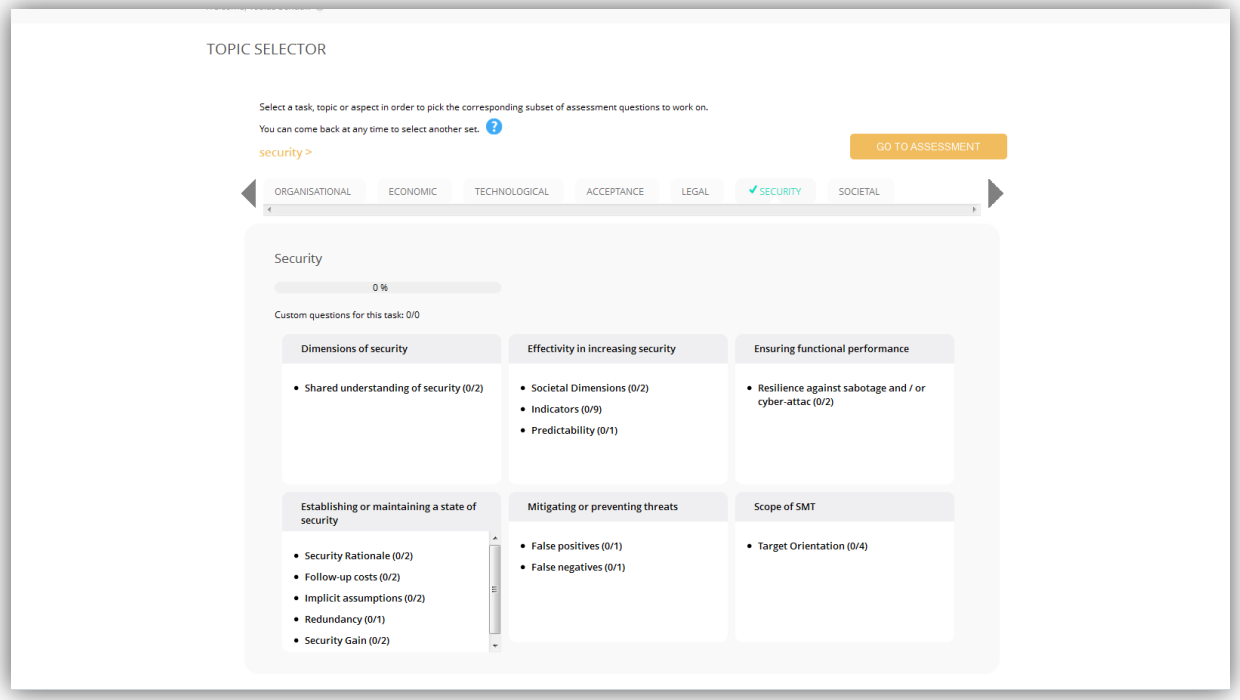
You can add as many as you like.

Here, the more diverse the better.

Creating a new assessment case



The Assessment

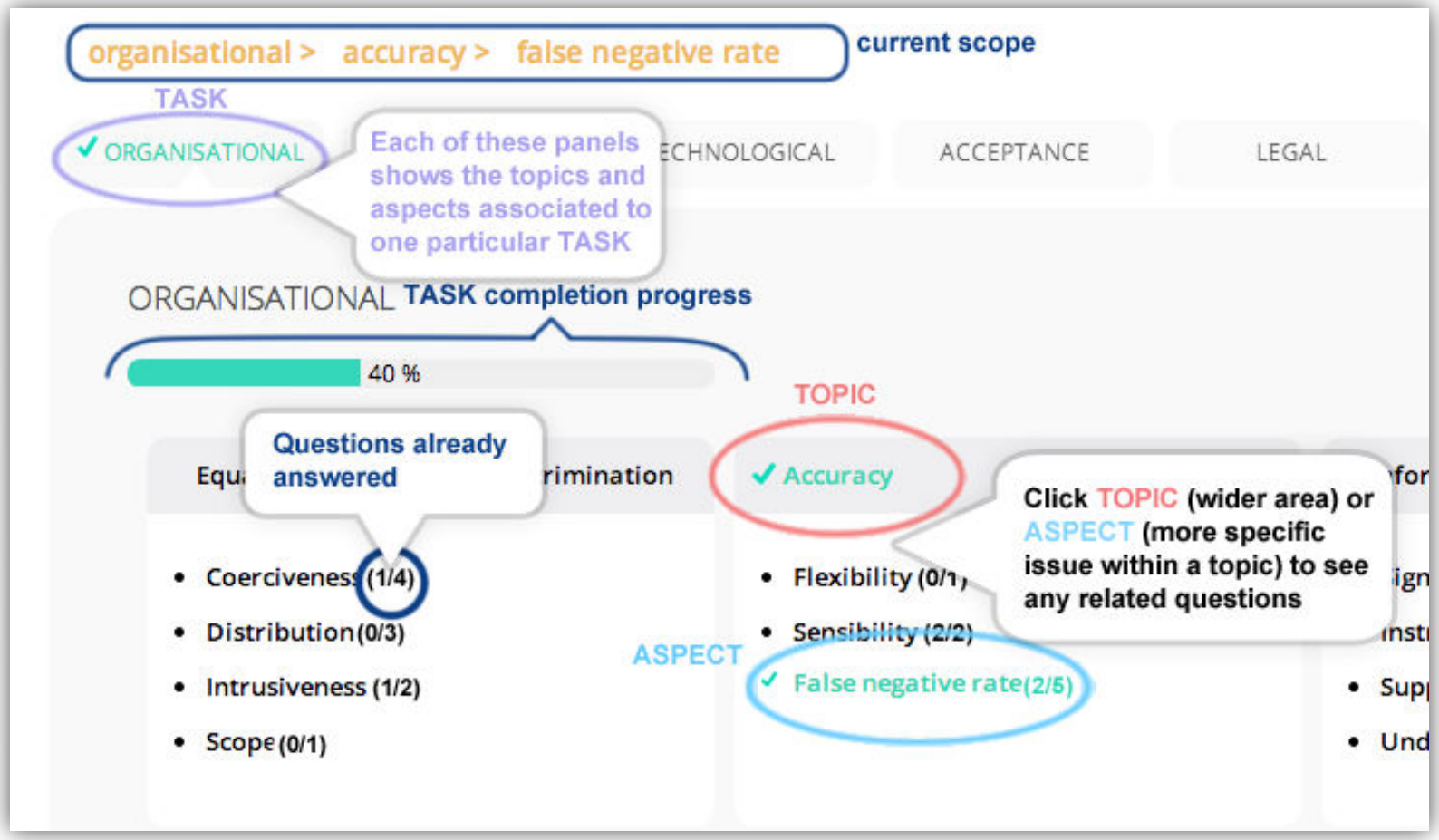


This is the beginning of the assessment of your case.

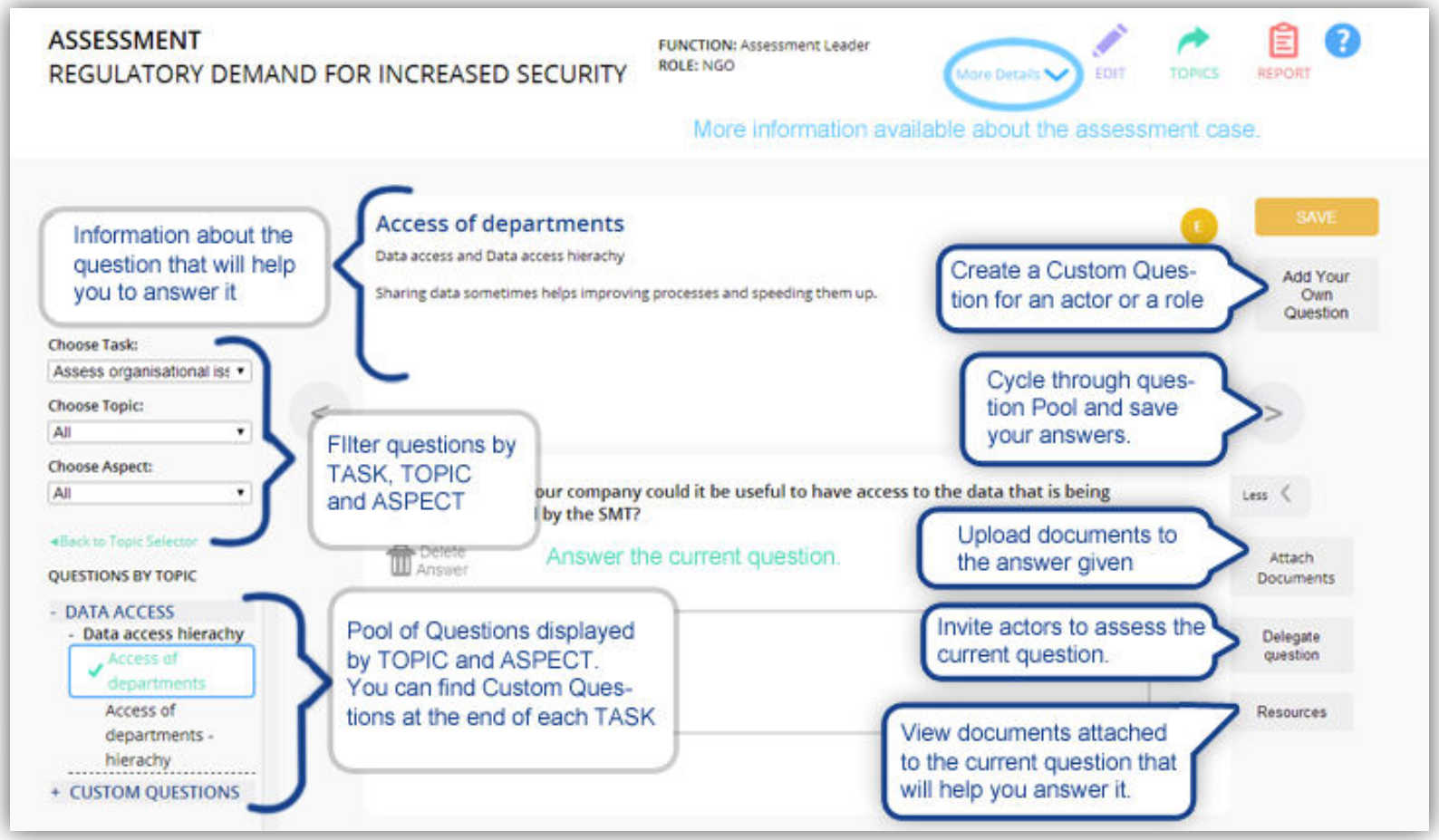
The case starts on the overview of outstanding tasks which structure the questions.

Here you can pick subsets of assessment questions.

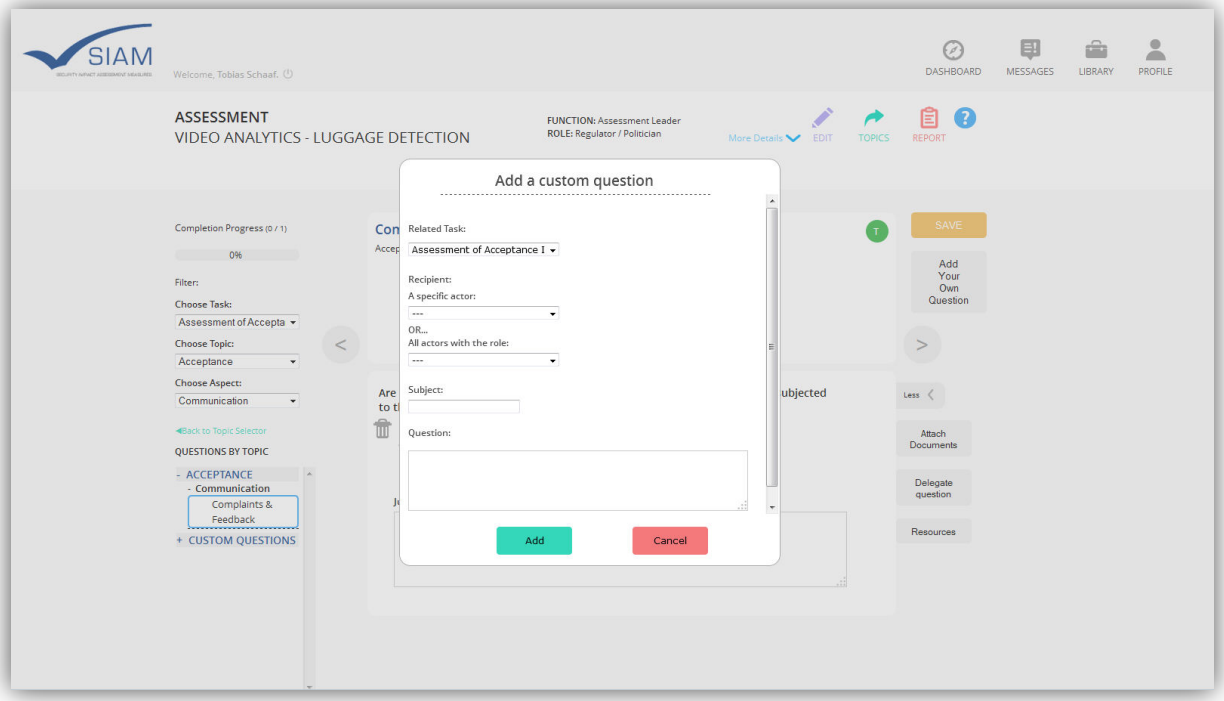
The Assessment



The Assessment


ASSESSMENT
REGULATORY DEMAND FOR INCREASED SECURITY
FUNCTION: Assessment Leader
ROLE: NGO
More Details
EDIT
TOPICS
REPORT
More information available about the assessment case.
Information about the question that will help you to answer it
Access of departments
Data access and Data access hierachy
Sharing data sometimes helps improving processes and speeding them up.
SAVE
Create a Custom Question for an actor or a role
Add Your Own Question
Choose Task:
Assess organisational iss
Choose Topic:
All
Choose Aspect:
All
Back to Topic Selector
Filter questions by TASK, TOPIC and ASPECT
Cycle through question Pool and save your answers.
our company could it be useful to have access to the data that is being
by the SMT?
Less
Delete Answer
Answer the current question.
Upload documents to the answer given
Attach Documents
QUESTIONS BY TOPIC
- DATA ACCESS
- Data access hierachy
Access of departments
Access of departments - hierachy
+ CUSTOM QUESTIONS
Pool of Questions displayed by TOPIC and ASPECT. You can find Custom Questions at the end of each TASK
Invite actors to assess the current question.
Delegate question
Resources
View documents attached to the current question that will help you answer it.

The Assessment



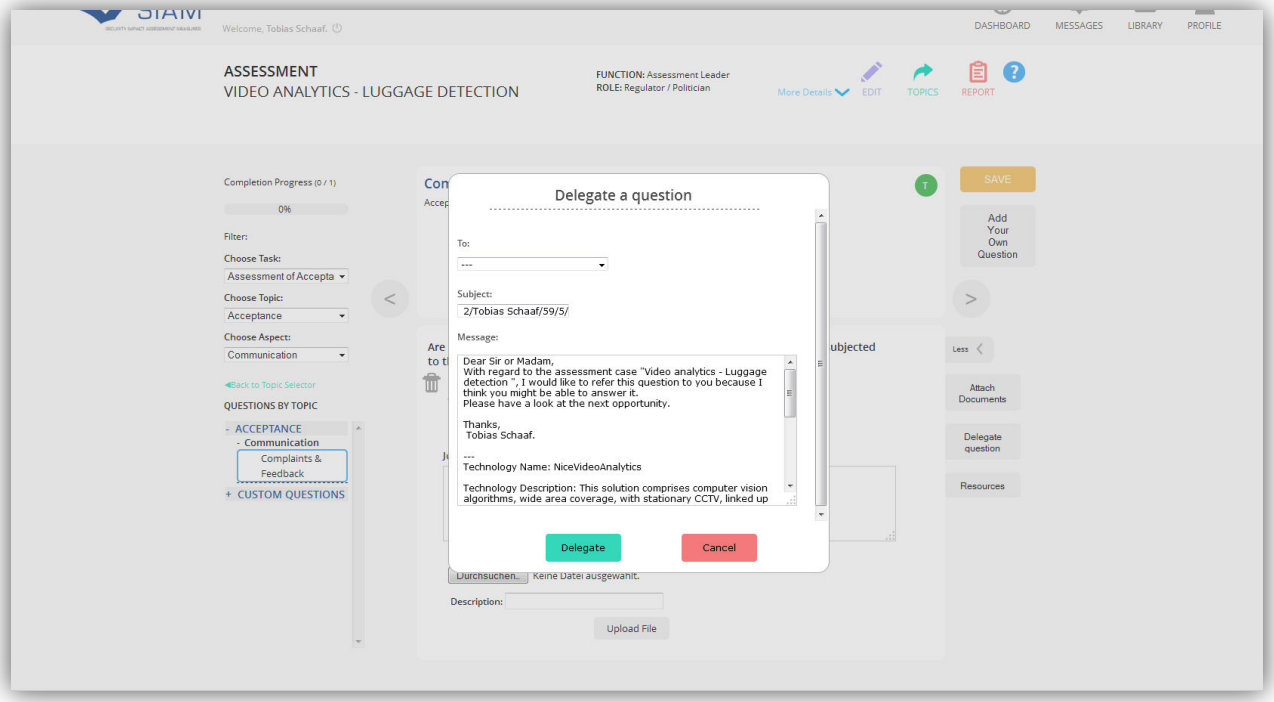
If you are answering questions and a follow-up question comes into your mind, you can just add your own.

You will have to tagg the question to a related task.

Furthermore you can choose to whom this question will be posed.

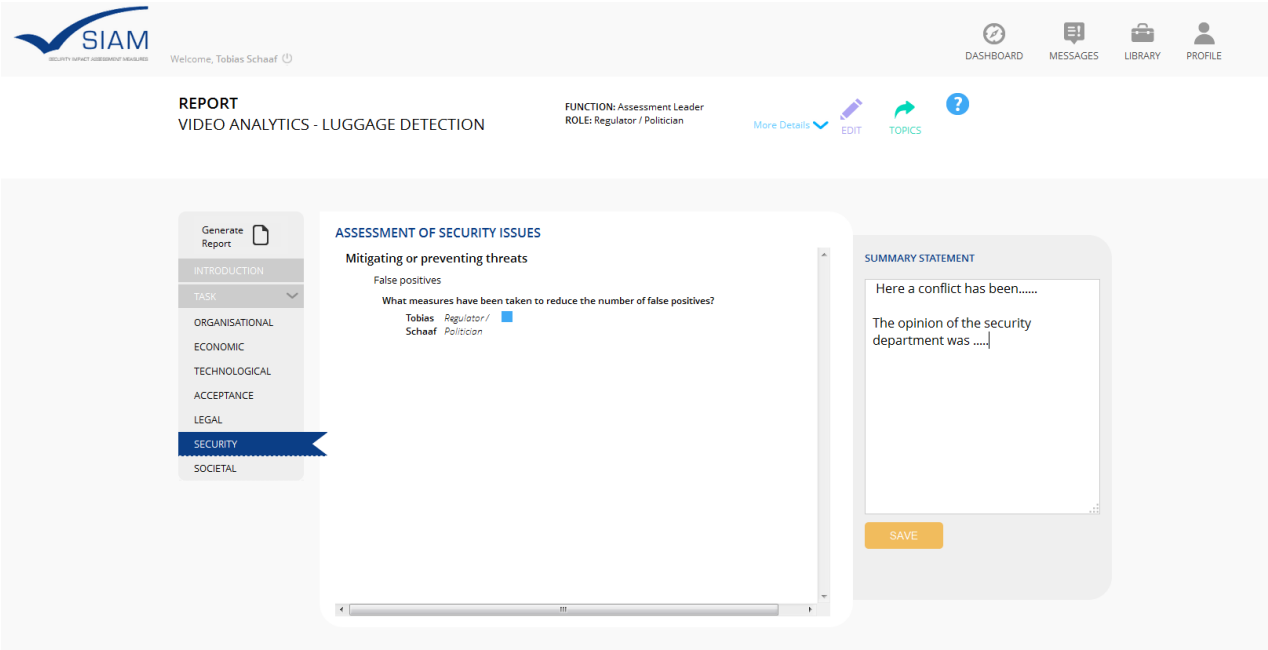
You can pose the question to a particular participant (Actor-name) or you can pose the question to everybody with a certain role.

The Assessment



Sometimes you will not be able to answer a question or you know someone else who is an expert in that matter. Therefore the AST integrated messaging system enables you to directly consult another assessment case participant.

The Assessment - Summary



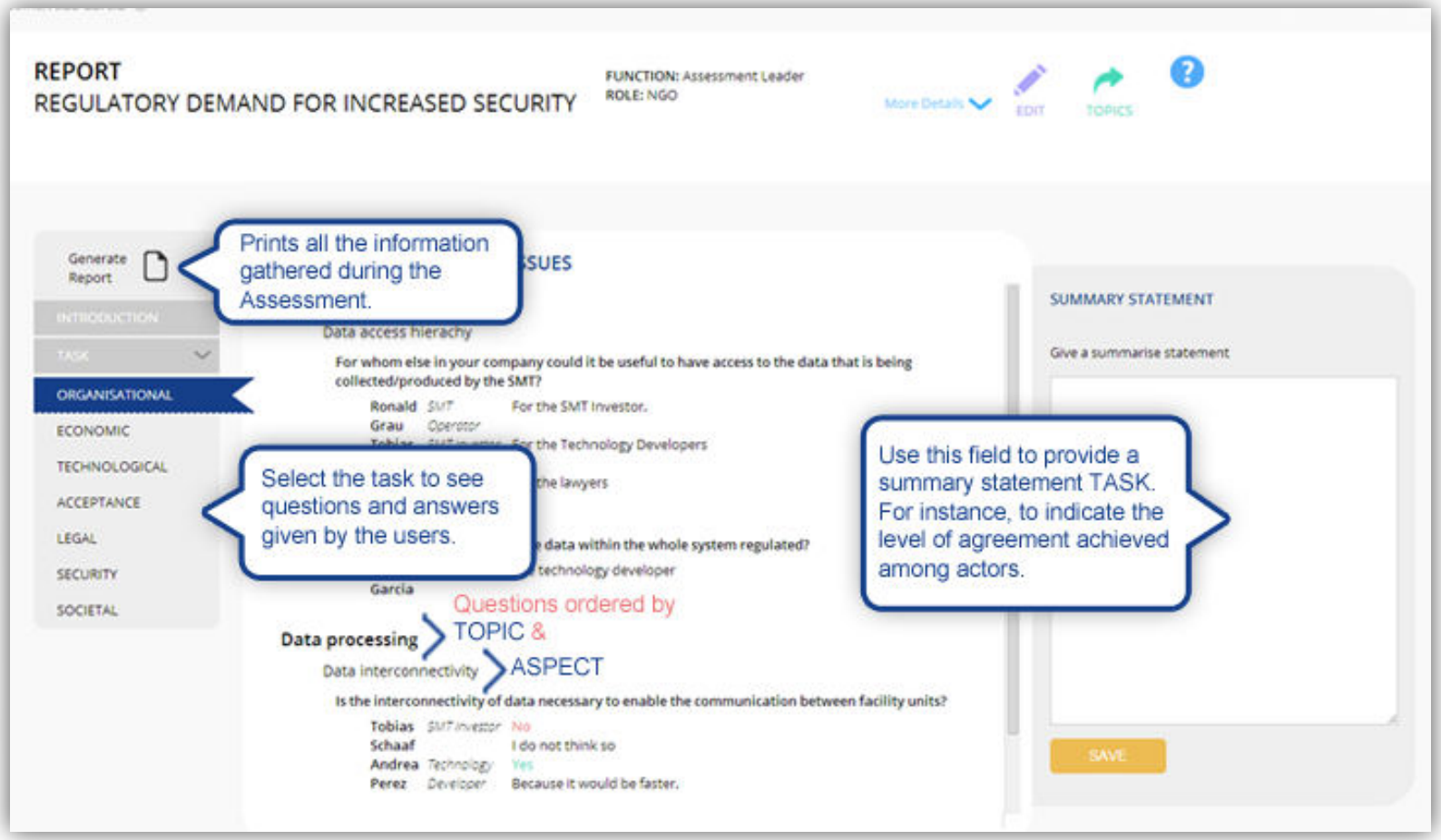
After the assessment is over the assessment leader will have to summarize the answeres have given.

The system will provide in a structured manner each question with each given answer and by whom this has been answered.

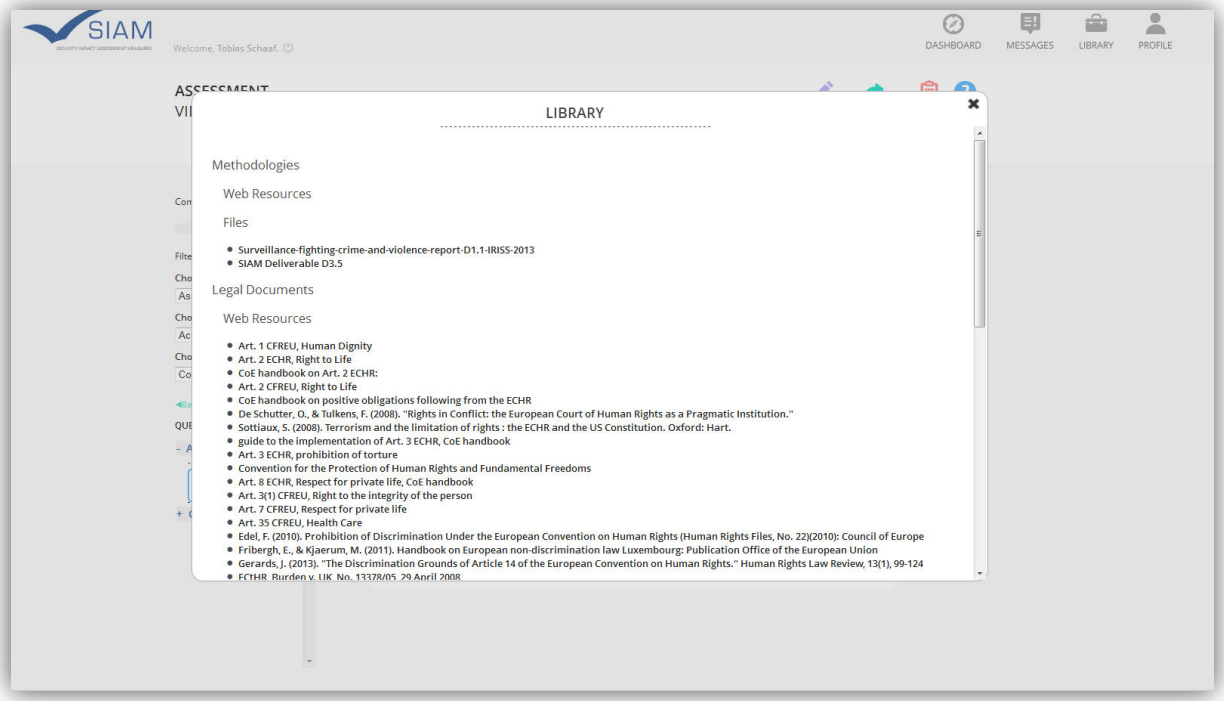
The system also will show if there are contricdiction in the answeres. Meaning it will show if people have clicked yes and no on the same question. Thus potential conflicts will be shown immediatley.

On the right side of the tool, the assessment leader will write the summary that will be shown in the report later. All questions and answers will be presented in the appendix.

The Assessment - Summary

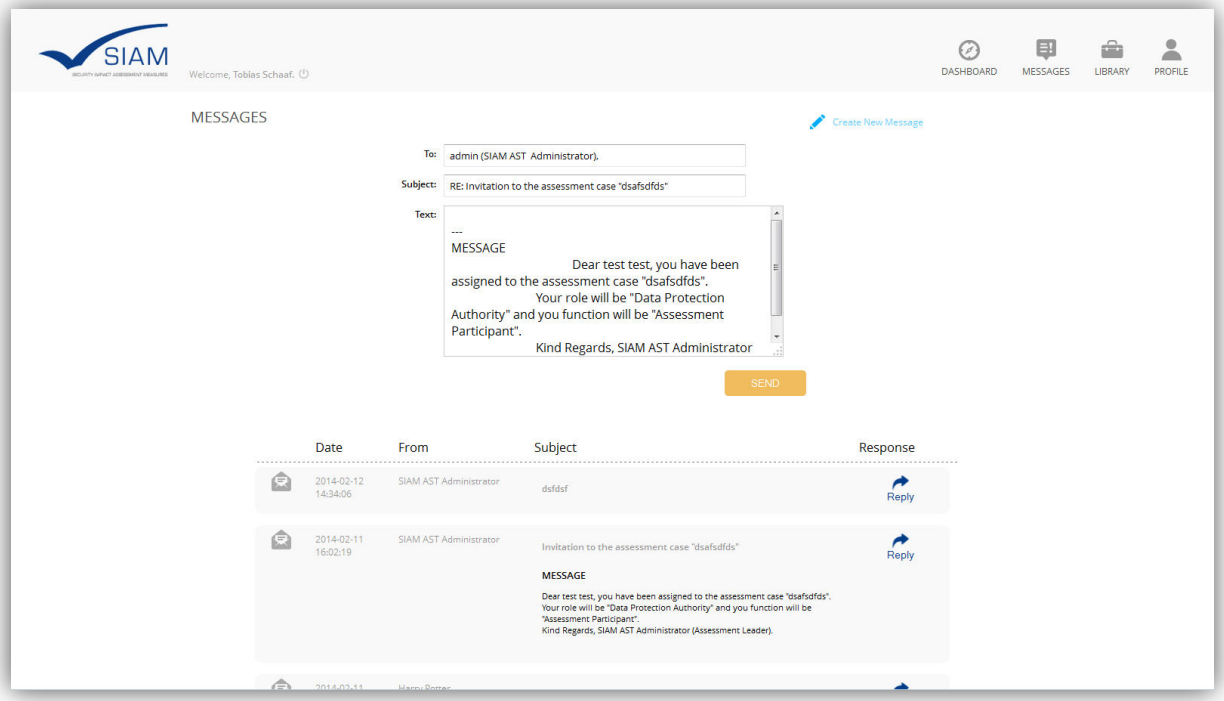


The Toolkit - Library


SIAM
Welcome, Tobias Schaaf.
DASHBOARD
MESSAGES
LIBRARY
PROFILE
LIBRARY
Methodologies
Web Resources
Files
Surveillance-fighting-crime-and-violence-report-D1.1-IRISS-2013
SIAM Deliverable D3.5
Legal Documents
Web Resources
Art. 1 CFREU, Human Dignity
Art. 2 ECHR, Right to Life
CoE handbook on Art. 2 ECHR:
Art. 2 CFREU, Right to Life
CoE handbook on positive obligations following from the ECHR
De Schutter, O., & Tulkens, F. (2008). "Rights in Conflict: the European Court of Human Rights as a Pragmatic Institution."
Sottiaux, S. (2008). Terrorism and the limitation of rights : the ECHR and the US Constitution. Oxford: Hart.
guide to the implementation of Art. 3 ECHR, CoE handbook
Art. 3 ECHR, prohibition of torture
Convention for the Protection of Human Rights and Fundamental Freedoms
Art. 8 ECHR, Respect for private life, CoE handbook
Art. 3(1) CFREU, Right to the integrity of the person
Art. 7 CFREU, Respect for private life
Art. 35 CFREU, Health Care
Edel, F. (2010). Prohibition of Discrimination Under the European Convention on Human Rights (Human Rights Files, No. 22)(2010): Council of Europe
Fribergh, E., & Kjaerum, M. (2011). Handbook on European non-discrimination law Luxembourg: Publication Office of the European Union
Gerards, J. (2013). "The Discrimination Grounds of Article 14 of the European Convention on Human Rights." Human Rights Law Review, 13(1), 99-124
ECtHR, Burden v. UK, No. 13378/05, 29 April 2008

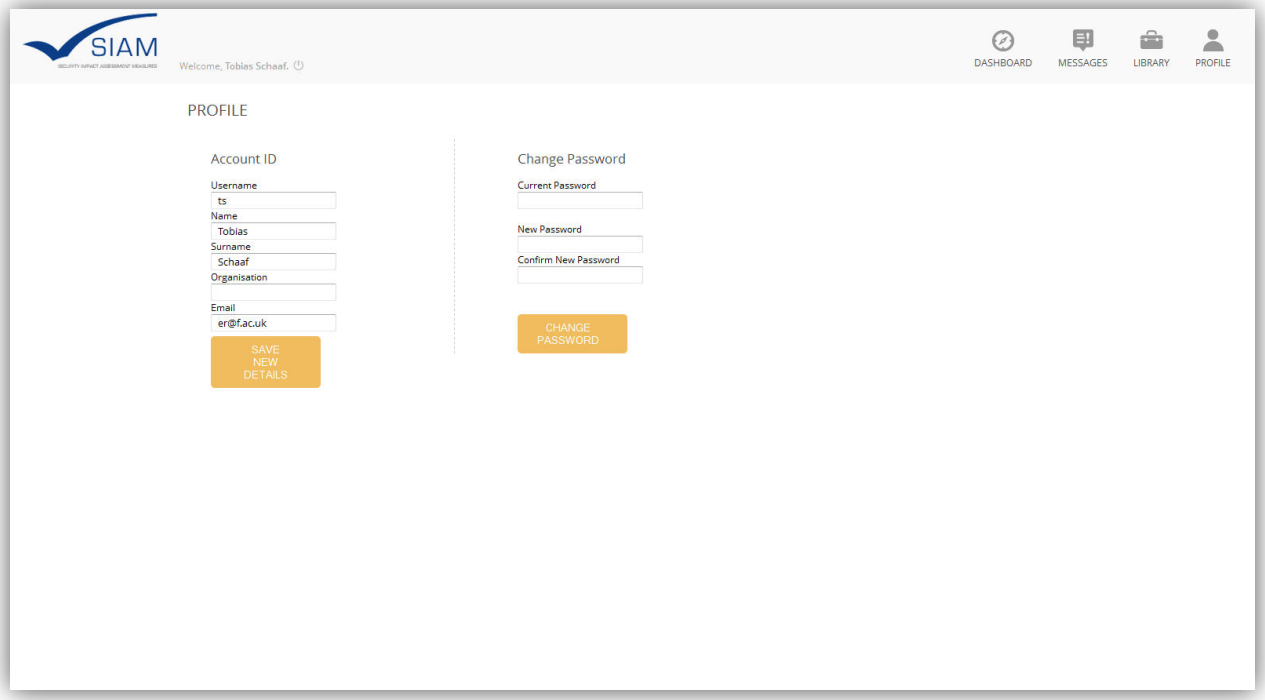
The SIAM AST also offers a vast library that supports you in finding answers to the questions.

The Toolkit – Messaging System



The SIAM AST has an internal messaging system that will inform you about questions that you might have delegated to others or that have been delegated towards you.

Account Managing



The slim profile account manageing system helps you to specifiy your account and your information. It also is the place to change the password that has been assigned to you the the administrator.

SIAM AST

Administration Console

User Manual

20 February 2014

DR RONALD R. GRAU

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1. Introduction and Question Authoring Concepts

This document contains instructions for a web-based tool that allows users to design the screens which present those assessment questions, control their presentation, and assign further relational information for the analysis of any answers collected in the toolkit's assessment report. This administrative tool, originally built for project partner contributions to a request for information, has been further developed into an Administration Console for the SIAM AST. It is an administrator level program and its purpose is to allow the modification of the core data which sits at the heart of the system, with the pool of assessment questions being one part of this core. Whilst the document focuses on the tools available for authoring assessment questions, brief details are also given on the tools available for user administration and advanced options (These additional tools are largely self-explanatory). Normal end users (assessment participants) of the SIAM AST will usually not operate this tool. These users will log in to a dedicated user interface to engage in an assessment (There they can enter own custom questions which are specific to a particular assessment case).

There is a comprehensive range of video tutorials, covering almost an hour of illustrated explanations, and detailed How-To-walkthroughs for different features of the tool, in particular the authoring of questions. Access the entire range of video tutorials here:
http://www.youtube.com/playlist?list=PLDMjco4x4wUd_RAazIAriKfS9QA1kxU7f

Note that the tutorials refer to the original request for information (RFI#5), posed to the partners of the SIAM project. However, its practical content is still relevant for end users of the SIAM AST, as the question authoring functionality in the Administration Console is largely identical to the previous RFI#5 version of the program.

1.1 About Screens and Screen Groups

The SIAM AST data structures for assessment questions organise all data input around two major concepts: ***screens*** and ***screen groups***.

A ***screen*** contains 1) textual information which a user may see when presented with a *single question*, including a question heading, an introductory text, and the actual question text. A screen also has 2) configurational and relational information which includes the type of answer expected, the particular STEFi assessment perspective addressed by the question, the task to which a question belongs, or any supplementary documents that should be presented when the screen is shown.

Each screen has a specification of the SMTs to which it applies and the actors to which it should be shown. The presentation of a screen can also be configured to depend on a specific answer given to a previous question (see 3.3 for more details).

A ***screen group*** is a container for one or more screens and defines the joint context (topic + aspect) for the questions displayed by any of the screens it contains. There may be many screen groups that have the same combination of topic and aspect, yet different questions in them. The purpose of screen groups is to organise those questions that are closely related to each other and allow additional constraints to be defined for their presentation (Figure 1).

Firstly, all screens in a screen group *can be ordered* to be presented in a particular sequence. This allows for the formulation of several questions to explore and assess the same issue, for instance going from a very general question to more specific ones.

Secondly, screens that reside within the same screen group can have *additional conditions* that control their presentation, based on answers given to previous questions in that group. For instance, there could be an initial Yes/No question, followed by another which elicits more details. If both questions sit in the same group, a condition can be put on the second question to be shown only if the answer to the first question was "Yes".

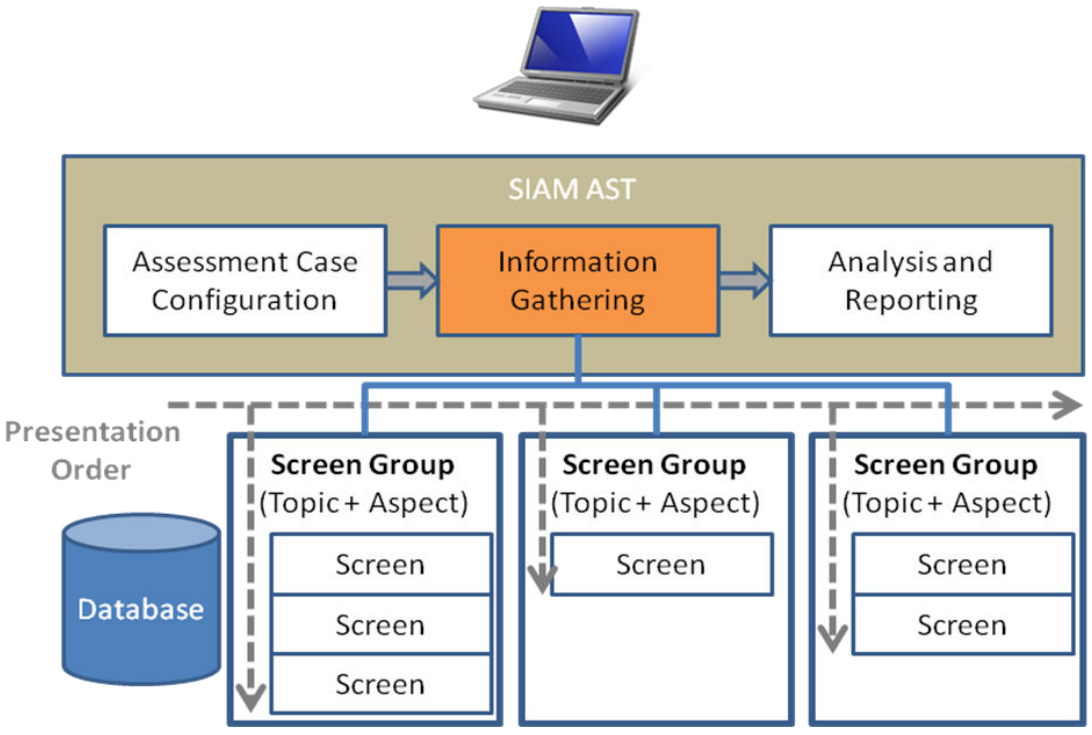

Figure 1: Screen Groups and Screens in the SIAM AST

When selecting a question for presentation to some user, the SIAM AST will first select all available screen groups based on their context definition, and then further evaluate whether any questions that reside within these groups should be shown.

Entering the required information to create a question involves three steps, which are detailed in the following sub-sections.

1.2 Screen Group Context

This term relates to selecting a combination of

1) a ***topic*** and
2) an ***aspect***

to set the context for a question. As screens (which contain individual questions) are always organised within screen groups, independent of whether there is a single question or several questions in a group, the context is a technical attribute of the screen group.

For example, one possible context for questions about freedom infringement is the topic “Bodily Integrity“, and its dependent aspect “Intrusiveness”.

1.3 Screen Content

This is relates to all information that directly defines a screen:

1) A heading
2) An info text
3) A question text
4) A question type
5) A STEFi perspective
6) A related task
7) Any supplementary information that should be provided to the user

1.4 Screen Relevance

Screen relevance settings can be made to control the presentation of a screen. All screens, including those which reside in the same screen group, can have their individual relevance settings.

These include

1) SMT groups and –types for which the questions should be considered by the toolkit.
2) Particular actors to which the question should be shown
3) Conditions to make presentation of a screen dependent on the answer given to a previous question in the same group.

2. Access, Workspace Areas and Navigation

2.1 Basics and Layout

Apart from the home page, all editing tools in the Administration Console share a similar work space layout:

1) A header bar
2) A navigation and control panel on the left-hand side
3) A main work area to the right of the control panel

2.1.1 Access and Home Page

You can access the Administration Console through the main login page of the SIAM AST (click the respective link which sits underneath the login input fields). You will then be redirected to a different page to login to the administrative interface (Figure 2).

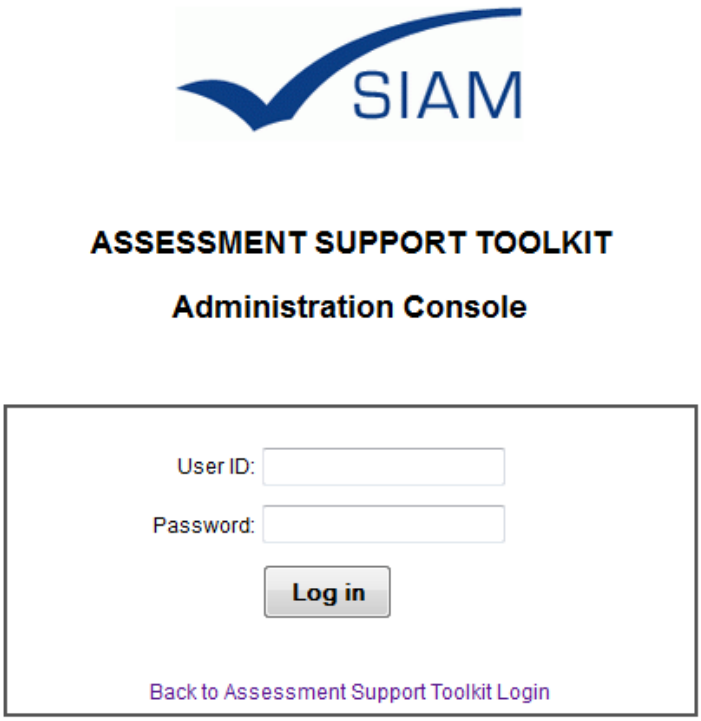

Figure 2: Administration Console Login

After the system has been newly set up, the default login is admin/admin. You can create additional users with the Administration Console, but note that only users of type “Administrator” or “Developer” can access the Administration Console.

2.1.2 Header Bar

The header bar is a simple heading display: It tells what tool is currently in use (Core Data) and what you are currently doing (Create or Edit Question).

2.1.3 Navigation and Control Panel

This part on the left-hand side is the primary means for navigation. It provides a range of “Actions” suited for the current input screen, filters for the overview table, as well as contextual information and tools for editing screens (Screen group context, order of questions, special commands).

Note that clicking on any of the links shown in this panel will save any entries made before going to the selected destination, except for “Cancel” commands.

2.1.4 Main Work Area

This is where data is displayed (Overview table) or entries made (e.g., Context, Content, or Relevance). In the data input pages, there may be buttons at the bottom of the page – these are just there for convenience and usually have the same function as the “Actions” in the Navigation and Control Panel. When entering a new question, there are special buttons that allow you navigate to the next entry step.

2.2 Question Authoring Specifics

Throughout the process of creating or editing screens, there are one overview and three main input screens corresponding to the descriptions in section 1.2 – 1.4. All three need to be edited or configured to prepare a question for presentation on screen.

2.2.1 Overview Page

This is the first page presented upon entering the tool. It shows a table in the main work area, listing details of any screens which have been set up thus far.

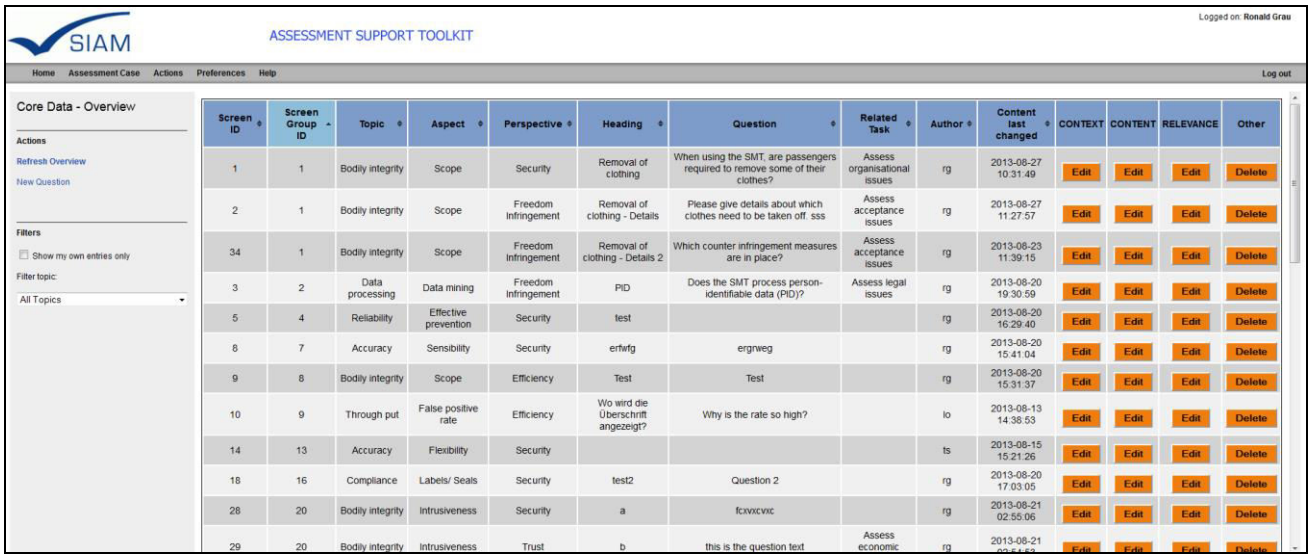
SIAM
ASSESSMENT SUPPORT TOOLKIT
Logged on: Ronald Grau
Home
Assessment Case
Actions
Preferences
Help
Log out
Core Data - Overview
Actions
Refresh Overview
New Question
Filters
Show my own entries only
Filter topic:
All Topics
Screen ID
Screen Group ID
Topic
Aspect
Perspective
Heading
Question
Related Task
Author
Content last changed
CONTEXT
CONTENT
RELEVANCE
Other
1 1 Bodily integrity Scope Security Removal of clothing When using the SMT, are passengers required to remove some of their clothes? Assess organisational issues rg 2013-08-27 10:31:49 Edit Edit Edit Delete
2 1 Bodily integrity Scope Freedom Infringement Removal of clothing - Details Please give details about which clothes need to be taken off. sss Assess acceptance issues rg 2013-08-27 11:27:57 Edit Edit Edit Delete
34 1 Bodily integrity Scope Freedom Infringement Removal of clothing - Details 2 Which counter infringement measures are in place? Assess acceptance issues rg 2013-08-23 11:39:15 Edit Edit Edit Delete
3 2 Data processing Data mining Freedom Infringement PID Does the SMT process person-identifiable data (PID)? Assess legal issues rg 2013-08-20 19:30:59 Edit Edit Edit Delete
5 4 Reliability Effective prevention Security test rg 2013-08-20 16:29:40 Edit Edit Edit Delete
8 7 Accuracy Sensibility Security erfwfg ergrweg rg 2013-08-20 15:41:04 Edit Edit Edit Delete
9 8 Bodily integrity Scope Efficiency Test Test rg 2013-08-20 15:31:37 Edit Edit Edit Delete
10 9 Through put False positive rate Efficiency Wo wird die Überschrift angezeigt? Why is the rate so high? lo 2013-08-13 14:38:53 Edit Edit Edit Delete
14 13 Accuracy Flexibility Security ts 2013-08-15 15:21:26 Edit Edit Edit Delete
18 16 Compliance Labels/ Seals Security test2 Question 2 rg 2013-08-20 17:03:05 Edit Edit Edit Delete
28 20 Bodily integrity Intrusiveness Security a fcvvcvvc rg 2013-08-21 02:55:06 Edit Edit Edit Delete
29 20 Bodily integrity Intrusiveness Trust b this is the question text Assess economic rg 2013-08-21

Figure 3: Overview Page

One the left-hand side, the navigation and control offers options to refresh the table (to display any entries that may have been made by other users since the last refresh). Further, there are a couple of filters to limit the table display to one's own entries (based on the user name currently logged on), or single topics. Clicking on "New Question" will trigger a data input wizard which takes the user through the three steps required to set up a question: Context, Content, and Relevance.

On the right-hand side, the table provides buttons that allow editing context, content, and relevance for existing screens /screen groups. User can also choose to delete screens, if necessary. However for contributors this option is limited to those screens they have created themselves.

2.2.2 Screen Group Context Page

Before a question can be entered, you must select the topic and respective aspect that forms the context of that question.

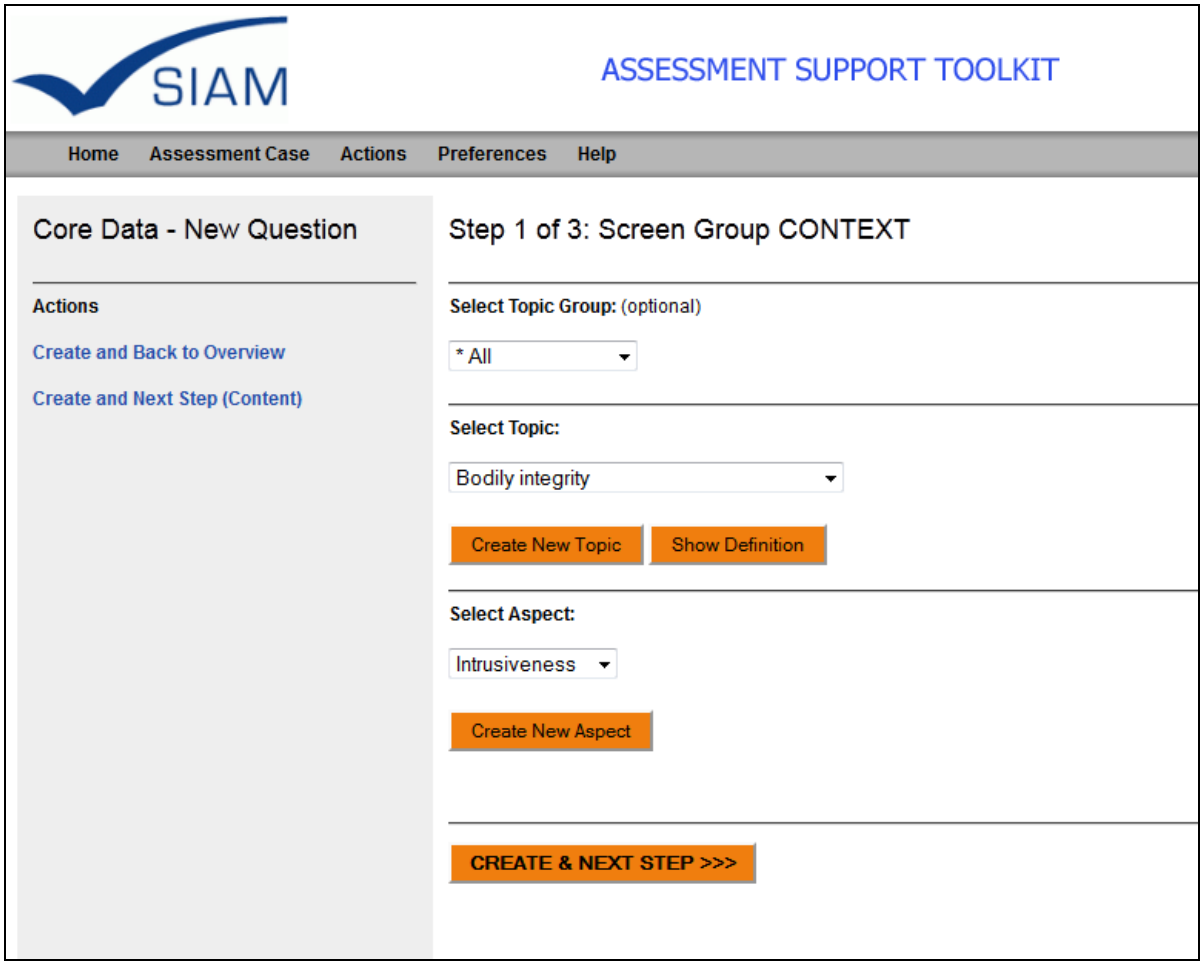

Figure 4: Step1: Create a Screen Group

This page has 3 drop-down menus for selection: Topic Group, Topic, and Aspect.

Topic Group: This is an optional selection, its purpose being to allow a user to find particular topics easier, e.g. selecting “Infringement” will limit the selectable topics to those primarily to do with infringement.

If unsure about which group your desired topic may be located in, leave this at the “* All” – setting.

Topic: Select the main topic context for the question to be entered in the next step. Selecting a topic will limit the subsequent selection of aspects to those defined for the topic. For instance, selecting any freedom infringement type will limit the available aspects to the normativity dimensions (Scope, Intrusiveness, Coerciveness, and Distribution). Selecting what was previously called an “Assessment Criterion” as a topic will limit the aspects to its “attributes”.

Buttons:

“Create New Topic” will open a popup window allowing you to define an entirely new topic and its definition. Note that the topic will be placed in the currently selected topic group – if you don’t want to associate your new topic with any group, leave the topic group at the “* All” setting before clicking this button.

“Show Definition” will display the definition of the topic currently selected. Note that most predefined topics don’t have a definition yet (These will be inserted into the database at a later stage)

Aspect: This will display the particular assessment aspects or attributes belonging to a topic selected previously.

Note that a topic and its aspect need to be selected before a question group can be created, and subsequently, a question put in this group.

Button:

“Create New Aspect” will open a popup window allowing you to define a new aspect for the selected topic.

2.2.3 Screen Content Page

Here, you can edit the contents of a screen. A screen corresponds to a single question. In the navigation and control panel on the left, you see the screen group context set for the current screen.

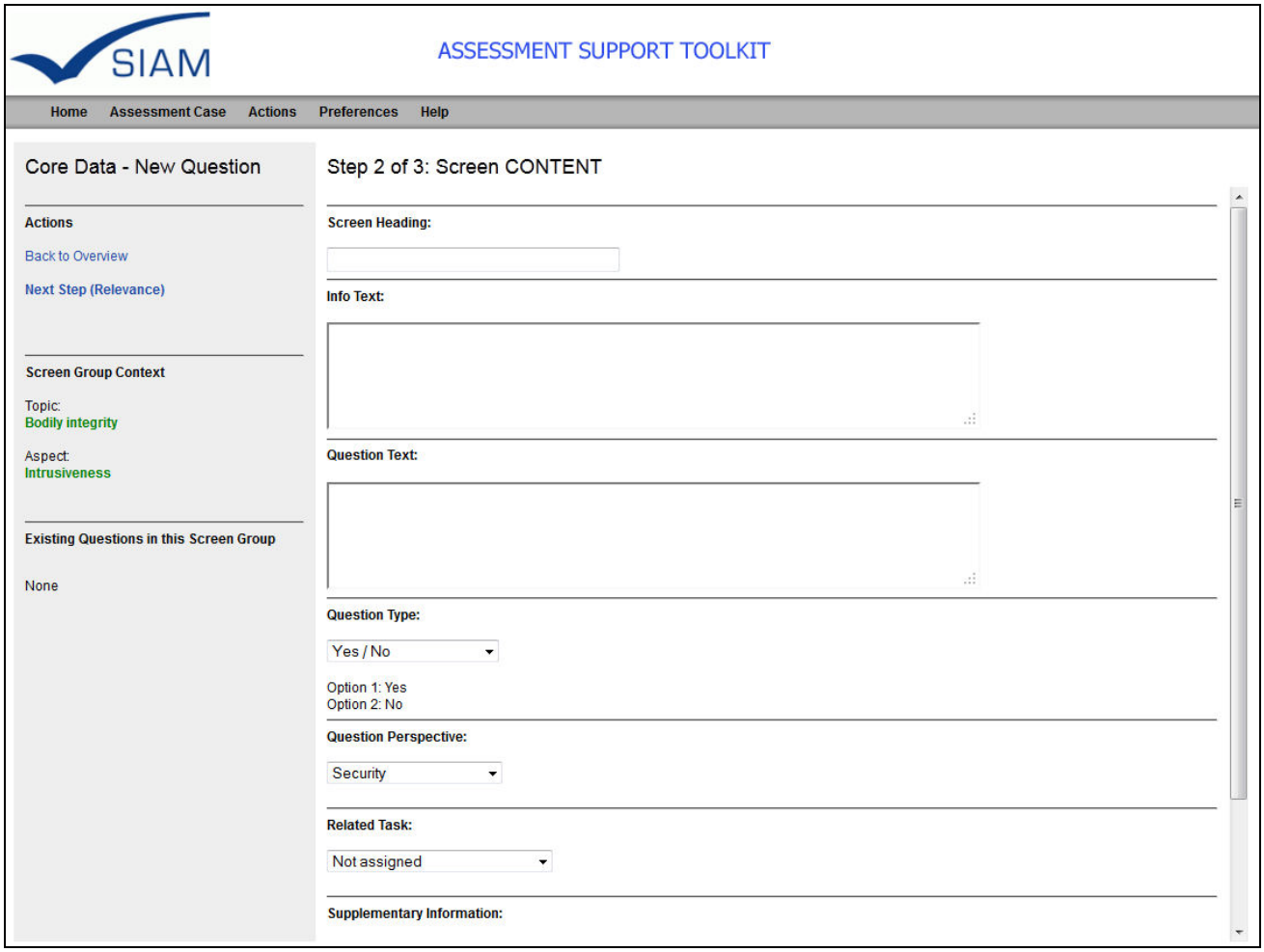

Figure 5: Step 2: Edit the Screen Content

As outlined in section 1.3, screen content comprises:

1) **Heading**

   This is the title of the screen, and will be displayed in addition to the topic + aspect of the question. Keep it short.

   Entering a heading is particularly useful if you have more than one screen in the current screen group, as it makes identifying the different screens easier when setting the order of their presentation (Section 3.4).

2) **Info text**

   This text will displayed before the question. It could be used as an introduction, or to give instructions to the end user on how to answer the question in this screen.

3) **Question text**

   This is the actual question. Please consider the question type when formulating the question text (next).

4) **Question type**

   Choose one of the question types provided. Consider that this will determine how users can answer the question, and how answers for this question can be summarised in the assessment report.

   Every question can only have one answer type. If you discover you would like to elicit several types of answers for a particular issue, this indicates that several, specific questions are needed. Add separate questions (i.e. screens) for every type of answer desired.

5) **Question perspective**

   Every question explores one particular assessment perspective (one out of STEFi). Choose the one that applies. If you think a particular issue may be assessed from different perspectives, add additional questions (i.e. screens) to make these explicit.

6) **Related task**

   Every question may be associated to a particular task. Depending on the answers given by the end users, it can later be determined in the assessment report to what extent these tasks have been addressed. Select the one that applies or leave unassigned.

7) **Supplementary information**

   Files and web links are presented as a reference to end users when the question is displayed in order to help them answer it. You can add web links or upload files such as PDF, images, Word documents, or spread sheets. As long as the SIAM AST is hosted at the Kingston University web space, make sure the file size does not exceed 2MB. We hope this can be increased later.

2.2.4 Screen Relevance Page

In this part, the presentation of the screen can be configured. At the top of this page, the heading, info text, and question text entered as content is displayed as a summary.

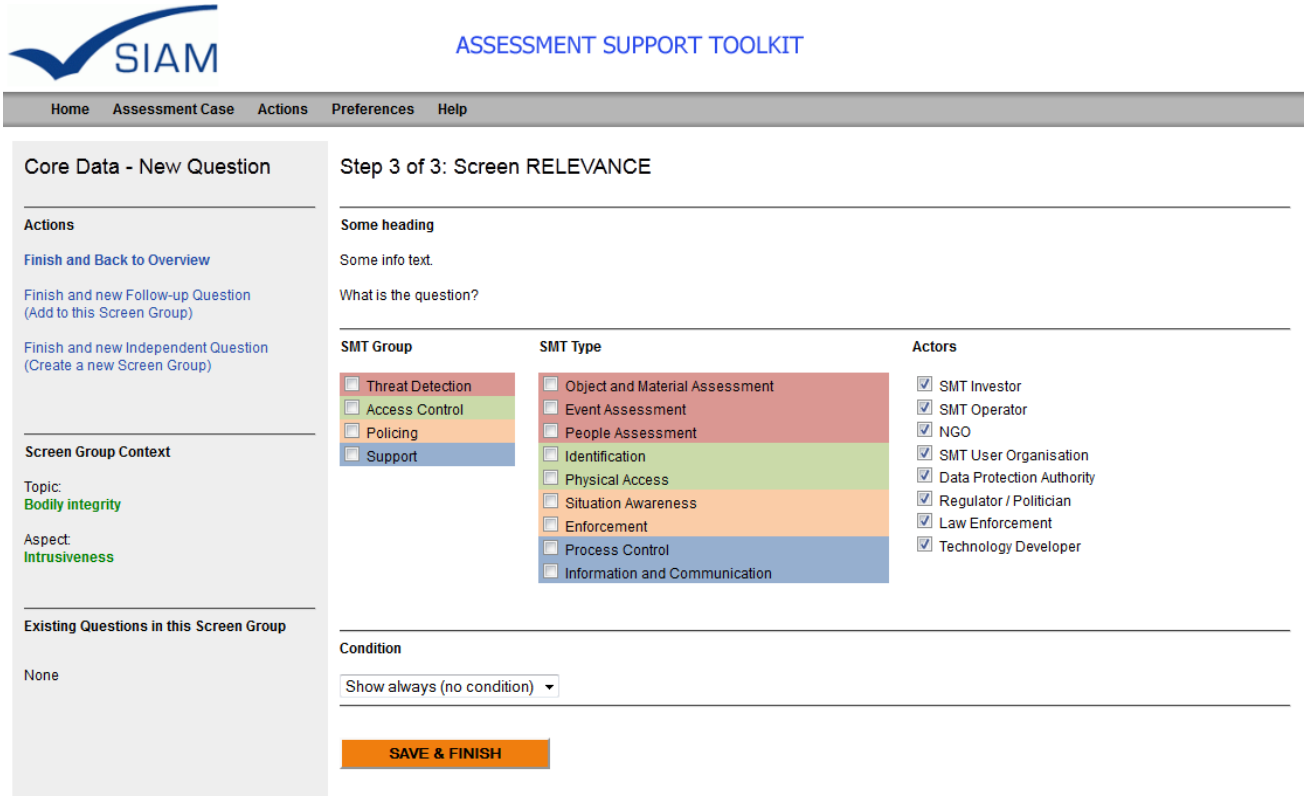

Figure 6: Step3: Configure Screen Relevance

SMT Group / SMT Type

Select the SMTs for which the question should be displayed. The relation between SMT groups and their SMT types are coded by colour. Clicking an SMT group will de-/select all corresponding SMT types.

Actors

Select the types of Actor who should see your question (By default, all actors are enabled).

When an assessment case is set up and different questions displayed, the various assessment participants logging on to the AST will have one of the actor types listed assigned to their user account. The system will then determine which questions to show to a user based on the selection made in this section.

Condition

If you have more than one question in a single screen group, it is possible to set up conditions here.

See section 3.4.3 for more details.

3. Question Authoring: How-To

The SIAM AST uses a pool of pre-defined assessment questions to display to any users of the toolkit which engage in assessment cases. Administrators can modify the question in this pool.

3.1 Manage Question Pool

On the home page, click the link “Manage Question Pool”. This will take you to the set of available question authoring tools.

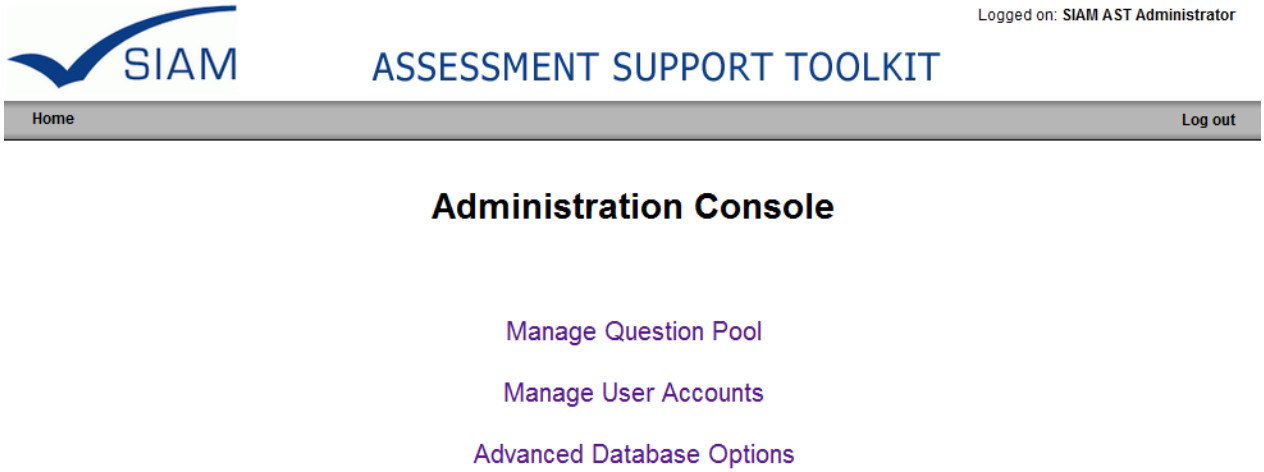

Figure 7: Administration Console Homepage

3.2 Create a New Question

On the overview page, click on “New Question” to start the data input wizard. The wizard will walk through the main steps as outlined in the subsequent sections, eliciting the necessary inputs on the way. The following subsections briefly outline the major steps that need to be carried out. More details on the individual pages can be found in section 2.2. Also note that there video tutorials for each page.

3.2.1 Step 1: Set the Context of the Screen Group

See the tutorial video here: http://youtu.be/GkZnkcrWtcE

1. Select a topic

2. Select an aspect
3. Click “Create & Next Step”

3.2.2 Step 2: Enter the Content of a Screen

See the tutorial video here: http://youtu.be/QmUhLdvsiAw

1. Enter a heading
2. Enter info text, if applicable
3. Enter the question text
4. Set the question type
5. Select question perspective
6. Select related task
7. Add supplementary information
8. Click “Save & Next Step”

3.2.3 Step 3: Configure the Relevance of a Screen

See the tutorial video here: http://youtu.be/CP1AcxHYF4Q

1. Select all SMT groups and/or types that apply to the question.
2. Deselect all actors who should not see the question.
3. Setup a condition that needs to be fulfilled for the question to be shown. This feature is only useful if there are at least two questions in the screen group. See section 3.4 for more details.

Upon finishing all selections, there is a choice to either

1) Click the “Save and Finish” button or the “Finish and go back to the overview” link.
   This will save any entries made on the last wizard page and load up the overview table.
2) Enter a new independent question (Link in the lower left of the navigation panel)
   This will restart Step 1 of the wizard, i.e. create a NEW screen group, and a NEW question within this group. This is useful for entering many independent questions quickly, one after the other.

3) Enter a follow-up question (Link in the lower left of the navigation panel)

   This will go to Step 2 of the wizard, prompting you to enter a NEW question within THE SAME screen group. This is useful for specifying a set of question which depend on each other in terms of mutual conditions, or the sequence of presentation.

See Figure 8 below for an overview of the wizard navigation logic.

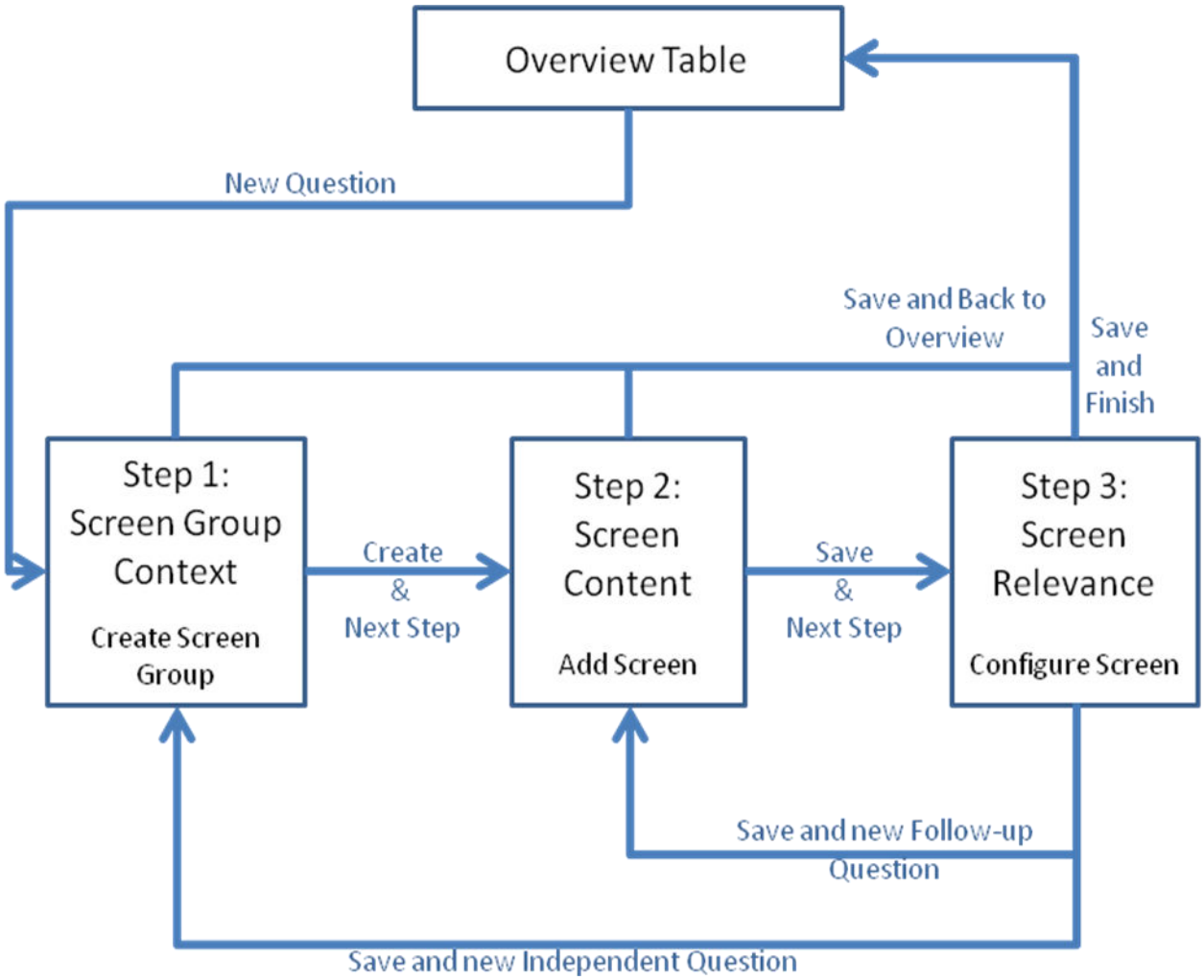

Figure 8: Navigating through the Data Input Wizard

3.3 Edit Existing Questions

See the video tutorial here: http://youtu.be/_HMJvXmhMoI

The core data tool allows editing all elements of any questions which have been created previously. Some special functions, like the ordering of screens that reside within a screen group, are only available when editing screens (see section 3.4).

Overall, the screens for editing are structured exactly as the data input wizard pages and look more or less the same, yet are accessible individually. Hence, they can be operated in the same way as the data input wizard.

3.4 Work with Screen Groups

In principle, there is no problem in adding only single, independent questions into the database. Technically, these then constitute a series of screen groups with every group carrying a single screen (=question) each (cf. Figure 1).

However, screen groups have been designed to be capable of containing more than one single screen, which provides some interesting features for entering more sophisticated question structures. As introduced in section 1.1., having more than one question in a screen group allows these screens 1) to *be ordered in a sequence*, and 2) *to be extended with conditions* that control their presentation, based on the answers given to previous questions in that group.

3.4.1 Add a Question to a Screen Group

See the tutorial video here: http://youtu.be/zfujrkcptOQ

In the overview page, clicking “New question” will create an entirely new screen group containing a new question. Adding any follow-up questions to an existing screen group can be done either

1. In the *Screen Relevance* part (Step 3) of the data input wizard, i.e. right after one brand new question has been completely specified. To do so, click the link “Enter new Follow-up Question (Add to this Screen Group)” in the navigation and control panel.
2. When *editing* the *Screen Content* or *Screen Relevance* pages, by clicking the same link (further down, in the lower left part of the screen).

3.4.2 Change the Presentation Order of Questions in a Group

See the tutorial video here: http://youtu.be/ZpwNvJ92bEI

The navigation and control panel has a section “Questions in this screen group” which allows quick switching between questions specified within a single group and changing their presentation order. (Available when *editing* the *Screen Content* or *Screen Relevance* pages of a question.)

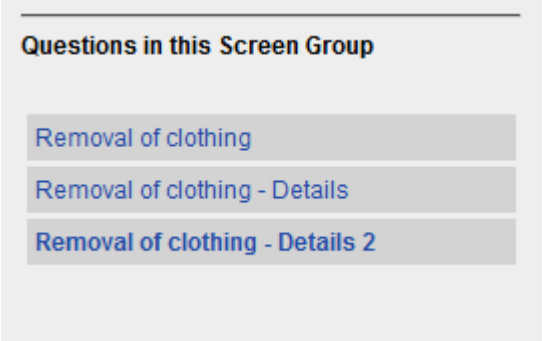

Figure 9: Quick-switch and Reposition the Order of Questions within a Screen Group

Simply point to one of the grey bars, and left-click to load the current editing page for a particular screen. Left-click and hold, and drag the grey bar above or below any of the others to reposition. When the mouse button is released, the grey bar will fall into place at the indicated location. Clicking any of the links in the “Actions” section will save the specified order.

Note: If any of the grey bars says “Empty heading”, then no screen heading was specified in the question’s screen content page. To do so, left-click on the “Empty heading” link and then on “Content” in the navigation panel, if necessary. Then specify a heading for the question. Upon saving the grey bar for that question will show the specified heading.

Note 2: Switching questions will automatically save your latest changes (Repositioning will not).

3.4.3 Set up Conditions for Questions in a Group

See the video tutorial here: http://youtu.be/zfujrkcptOQ

If a screen group contains at least two questions, conditions can be set between the questions that are presented in a particular sequence. Every question can have one condition, making its presentation dependent on the answer which was given to a previously presented question.

See Figure 10, for example. This shows a partial screen snapshot of the Screen Relevance page. On the left-hand side, it can be seen that there are three questions in the screen group: “Removal of clothing”, and two further questions asking for more details. The question displayed in bold font is the one which is currently being edited.

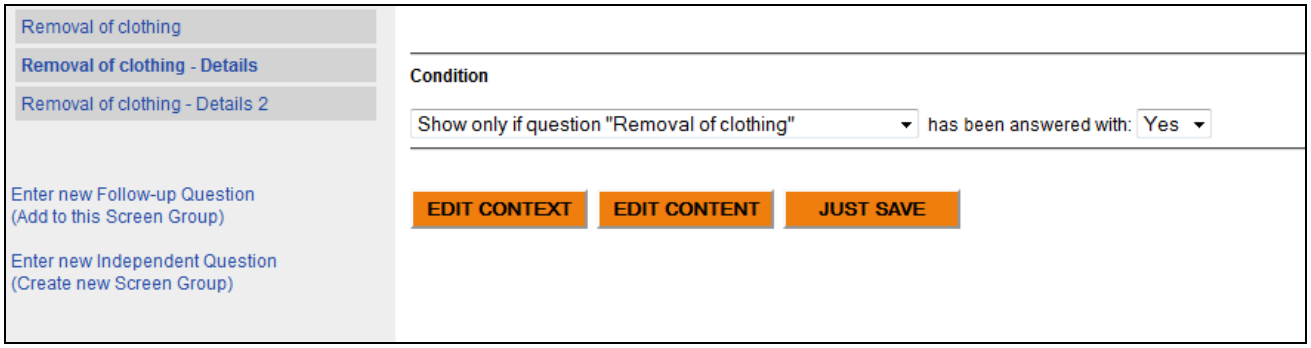

Figure 10: Setting Conditions on Questions

In this example, the condition has been set such that the first, main question needs to be answered with “Yes” for the second question to be displayed. In other words, the system will only ask for further details on the “Removal of clothing” issue, if this is in fact an issue, and skip the details questions otherwise.

In this general way, the display of questions within screen groups can be controlled based on the answers given by the end user to previous questions. This feature is particularly practical for using question sets which explore an issue from a general question towards more specific ones.

Note: When working with conditions, make sure your questions are put in the right sequence, and the initial question in a group is displayed unconditionally (to prevent locking out the entire screen group from presentation).

4. User Administration

Access the user administration tool by clicking “Manage User Accounts” on the console’s home page (Figure 7).

4.1 Overview

The overview page (Figure 11) provides a list of all SIAM AST user accounts, giving details on all associated information such as name, user ID, user type, user organisation, email address, relevant dates, as well as whether the account is currently active. Only active accounts can log in to the SIAM AST and/or the Administration Console.

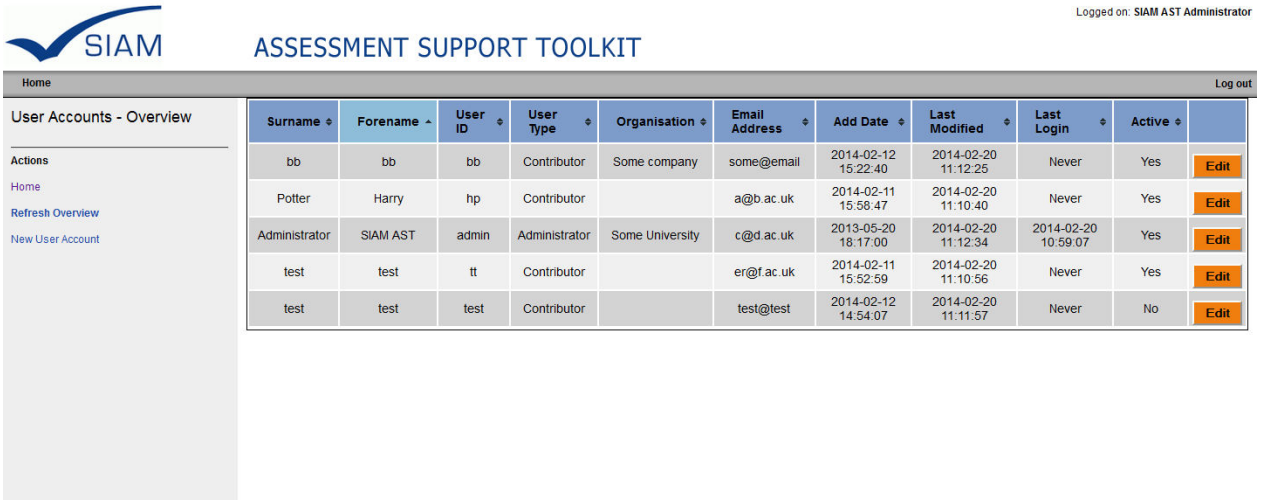
SIAM
ASSESSMENT SUPPORT TOOLKIT
Logged on: SIAM AST Administrator
Home
Log out
User Accounts - Overview
Actions
Home
Refresh Overview
New User Account
Surname
Forename
User ID
User Type
Organisation
Email Address
Add Date
Last Modified
Last Login
Active
bb bb bb Contributor Some company some@email 2014-02-12 15:22:40 2014-02-20 11:12:25 Never Yes Edit
Potter Harry hp Contributor a@b.ac.uk 2014-02-11 15:58:47 2014-02-20 11:10:40 Never Yes Edit
Administrator SIAM AST admin Administrator Some University c@d.ac.uk 2013-05-20 18:17:00 2014-02-20 11:12:34 2014-02-20 10:59:07 Yes Edit
test test tt Contributor er@f.ac.uk 2014-02-11 15:52:59 2014-02-20 11:10:56 Never Yes Edit
test test test Contributor test@test 2014-02-12 14:54:07 2014-02-20 11:11:57 Never No Edit

Figure 11: User Accounts - Overview

The page offers two significant actions

1) Create a new user account
2) Edit an existing user account

Note that single user accounts cannot be deleted, as these might be associated to existing assessment cases or data in the question pool. It is possible, however, to clear all user accounts once assessment cases and questions have been cleared from the database.[1]

[1] See the advanced database options, chapter 5.

4.2 Create a New User Account

A new user account can be created by clicking the action “New User Account” in the navigation and control panel on the left (Figure 11). A new page will open which provides the necessary input fields for entering the user information (Figure 12).

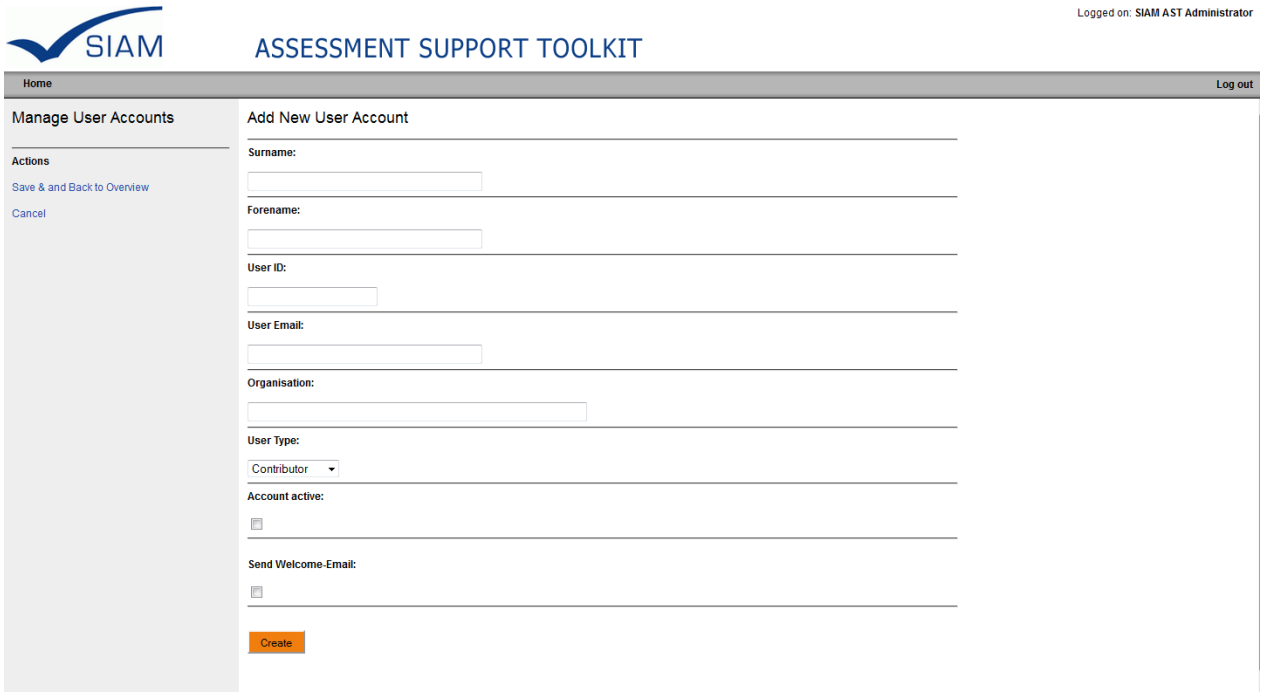

Figure 12: Create a New User Account

Upon specifying the user ID (and saving), the application will check whether this ID has already been assigned to a different user and prompt correction, if necessary. This is required to avoid duplicate login names.

User accounts need a user type specification. The SIAM AST currently offers three types:

1) Administrator
2) Developer
3) Contributor

For creating a normal SIAM AST user account, choose “Contributor” as type. The other types are only relevant for accessing the Administration Console.

If e-mail support has been activated in the application settings, there is an option to send a welcome email to the new user (using the stated email address)[2]. However, doing this is not required for creating a user account as such.

4.2 Edit an Existing User Account

By clicking the "Edit" button for a particular user account in the Overview page (Figure 11), the information associated to a user account can be changed as well. The respective page looks similar to that used for creating a new user but with all available information populated (Figure 13).

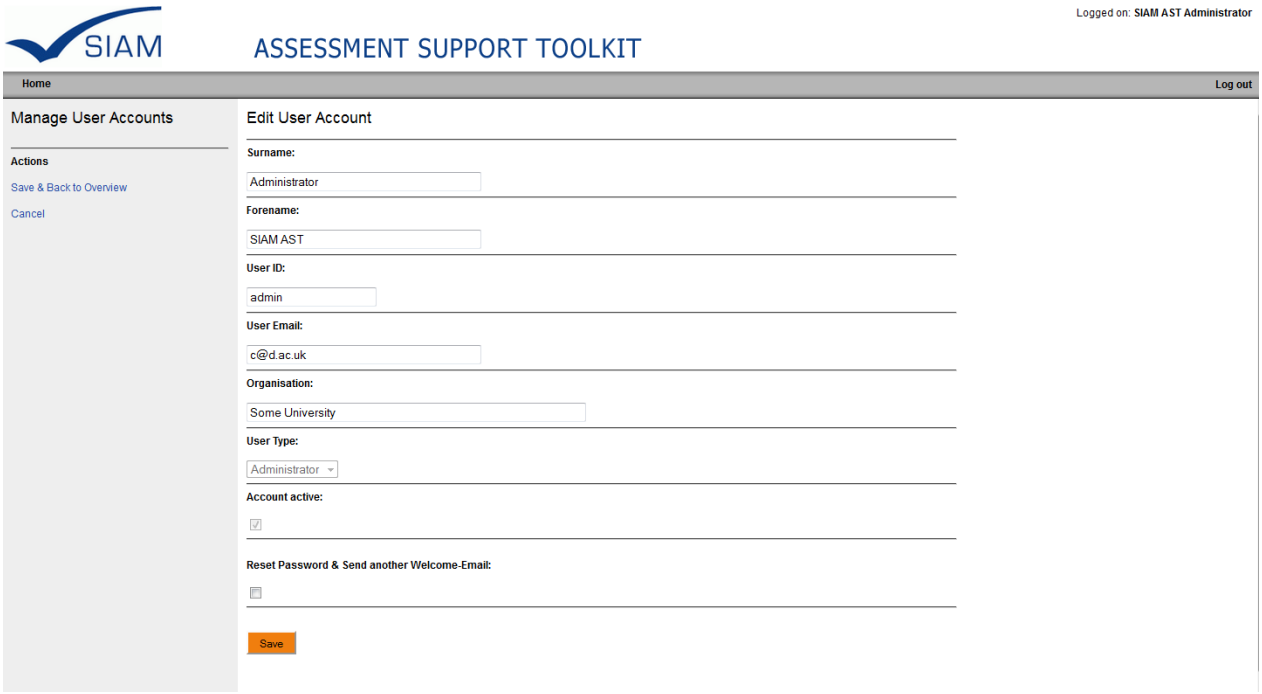

Figure 13: Edit an Existing User Account

Note that the application will prevent a console user to delete, or change the type of, a sole Administrator account. This is a safety measure to prevent any careless user from locking out by mistake the only available administrator account from accessing the system. However, if there is more than one user account of type "Administrator" specified in the system, these settings can be changed.

[2] See the SIAM AST Installation Instructions for details.

5. Advanced Database Options

The SIAM AST Administration Console offers advanced database options for making fundamental changes to the system's core data, including question pool, user accounts, assessment cases and related data, library categories, perspectives, tasks, and actor roles. These options can be useful to use the assessment support system for further research and apply its core mechanics and features to contexts other than those of the original SIAM project.

The feature set described in this chapter can be accessed by clicking “Advanced Database Options” on the console’s home page (Figure 7).

5.1 Overview

The available actions are listed in the navigation and control panel. Clicking on any of the actions for clearing database contents will display another page with details about what the action will do. As most of the clearing actions will make profound changes to the SIAM database, the user is required to explicitly confirm whether the action is to be carried out.

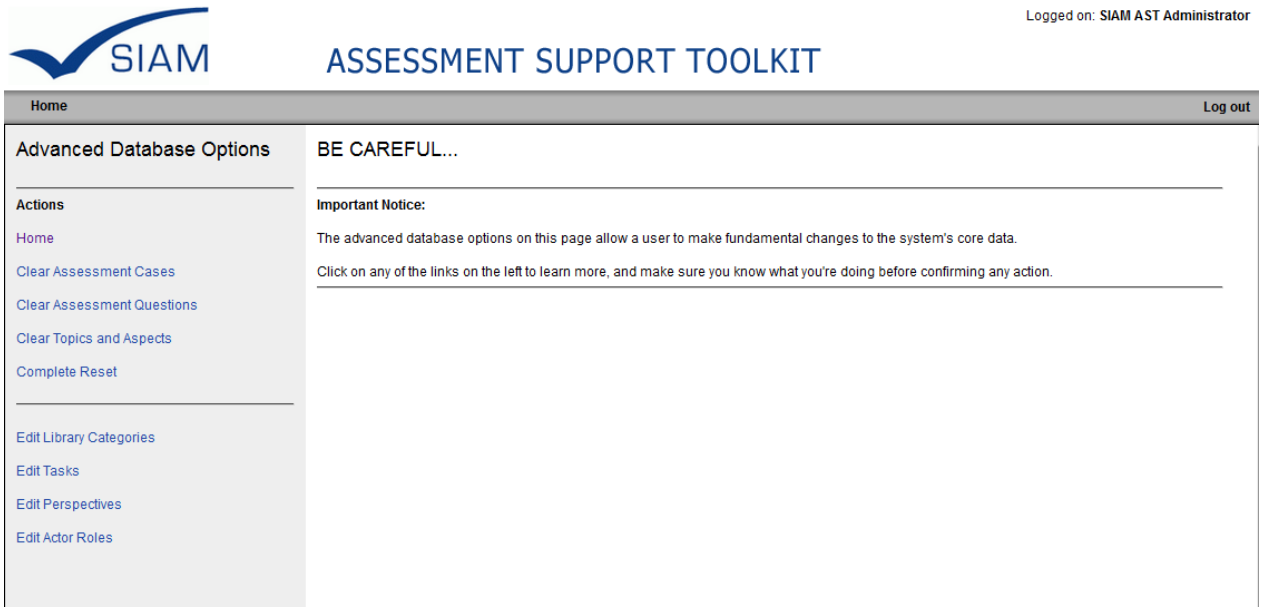
Logged on: SIAM AST Administrator
SIAM
ASSESSMENT SUPPORT TOOLKIT
Home
Log out
Advanced Database Options
Actions
Home
Clear Assessment Cases
Clear Assessment Questions
Clear Topics and Aspects
Complete Reset
Edit Library Categories
Edit Tasks
Edit Perspectives
Edit Actor Roles
BE CAREFUL...
Important Notice:
The advanced database options on this page allow a user to make fundamental changes to the system's core data.
Click on any of the links on the left to learn more, and make sure you know what you're doing before confirming any action.

Figure 14: Advanced Database Options - Overview

5.2 Clearing Assessment Cases

This action will delete all assessment cases from the database, including any answers given by participants. This action removes user-created assessment cases and answers, however the question pool and existing user database remains untouched so that new assessment cases can afterwards be created based on the original core data. When users log on to the SIAM AST after this action has been performed, their dashboard page will be empty.

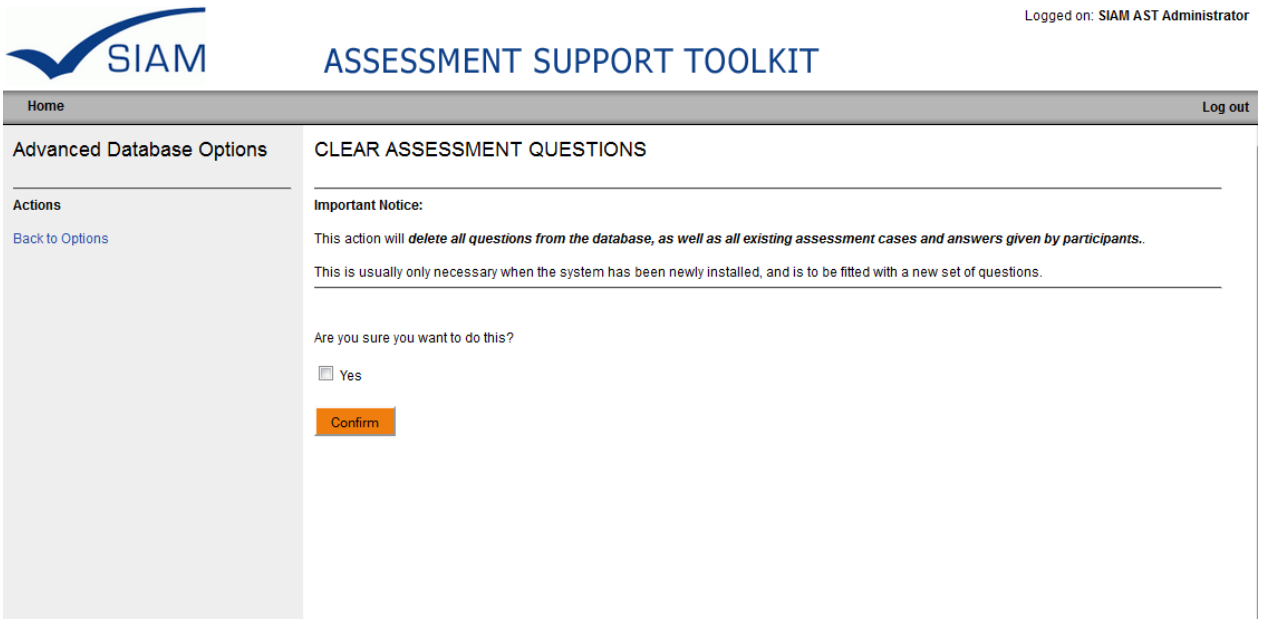
Logged on: SIAM AST Administrator
SIAM
ASSESSMENT SUPPORT TOOLKIT
Home
Log out
Advanced Database Options
Actions
Back to Options
CLEAR ASSESSMENT QUESTIONS
Important Notice:
This action will delete all questions from the database, as well as all existing assessment cases and answers given by participants..
This is usually only necessary when the system has been newly installed, and is to be fitted with a new set of questions.
Are you sure you want to do this?
Yes
Confirm

Figure 15: Advanced Database Options - Deleting Assessment Cases

5.3 Clearing Assessment Questions

This action will remove the standard question pool from the database, as well as all existing assessment cases and answers given by participants. The latter is necessary because there are active data links between the pool questions and existing assessment cases and related data which need to be removed as well.

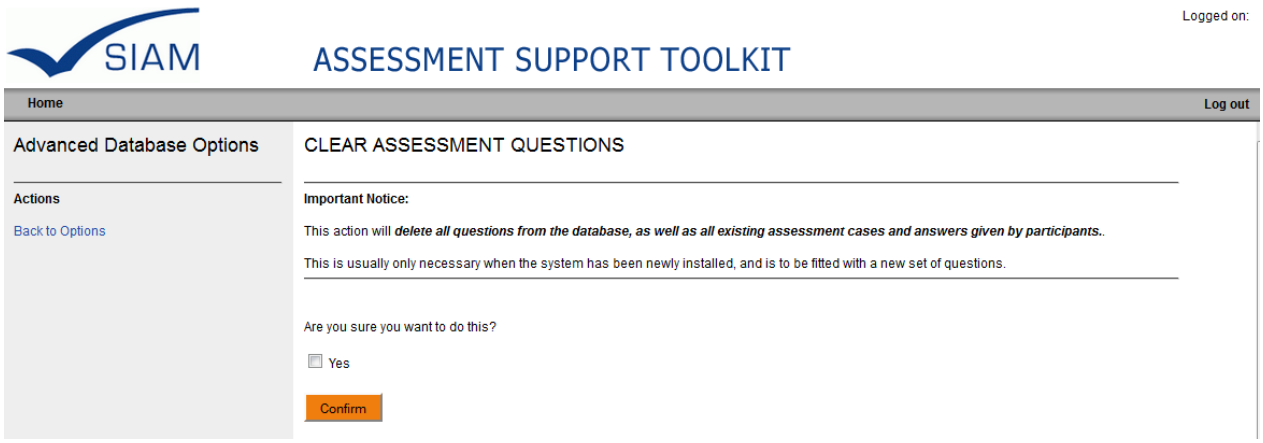
Logged on:
SIAM
ASSESSMENT SUPPORT TOOLKIT
Home
Log out
Advanced Database Options
CLEAR ASSESSMENT QUESTIONS
Actions
Back to Options
Important Notice:
This action will delete all questions from the database, as well as all existing assessment cases and answers given by participants..
This is usually only necessary when the system has been newly installed, and is to be fitted with a new set of questions.
Are you sure you want to do this?
Yes
Confirm

Figure 16: Advanced Database Options - Deleting the Question Pool

This action is usually only necessary when the system has been newly installed, and is to be fitted with a new set of questions.

5.4 Clearing Topics and Aspects

This action deletes all topics, aspects, and assessment questions from the database, as well as all existing assessment cases and answers given by participants. These data objects need to be cleared together because of active data links that exist between them in an installation.

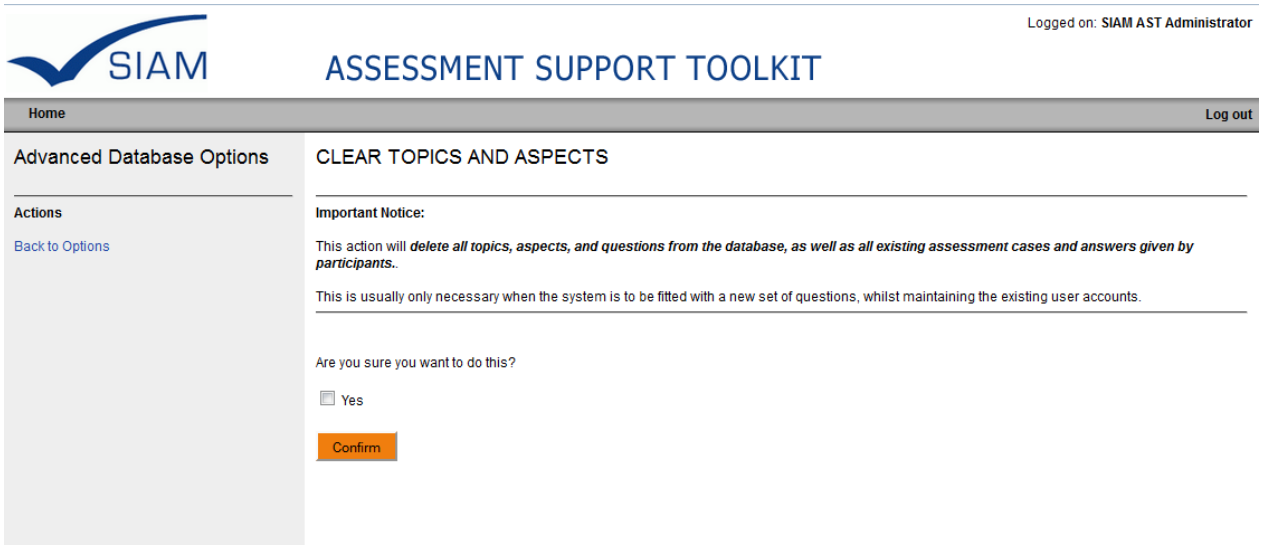
Logged on: SIAM AST Administrator
SIAM
ASSESSMENT SUPPORT TOOLKIT
Home
Log out
Advanced Database Options
CLEAR TOPICS AND ASPECTS
Actions
Back to Options
Important Notice:
This action will delete all topics, aspects, and questions from the database, as well as all existing assessment cases and answers given by participants..
This is usually only necessary when the system is to be fitted with a new set of questions, whilst maintaining the existing user accounts.
Are you sure you want to do this?
Yes
Confirm

Figure 17: Advanced Database Options - Deleting Topics and Aspects

This is usually only necessary when the system is to be fitted with a new set of questions, based on entirely new topics and aspects, whilst maintaining the existing user accounts.
Afterwards, new topics and aspects can be created using the question authoring tool.[3]

5.5 Complete Reset

This action will delete all assessment cases, questions, answers, topics, aspects, files, web resources, and existing users from the database.

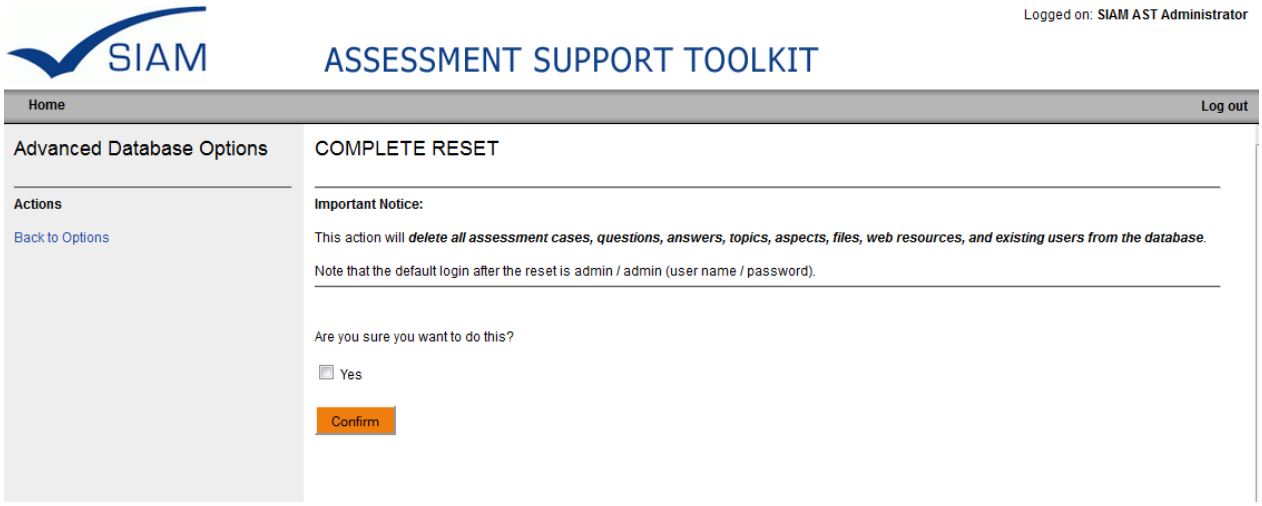
Logged on: SIAM AST Administrator
SIAM
ASSESSMENT SUPPORT TOOLKIT
Home
Log out
Advanced Database Options
COMPLETE RESET
Actions
Back to Options
Important Notice:
This action will delete all assessment cases, questions, answers, topics, aspects, files, web resources, and existing users from the database.
Note that the default login after the reset is admin / admin (user name / password).
Are you sure you want to do this?
Yes
Confirm

Figure 18: Advanced Database Options - Performing a Complete Reset

After the reset, only one user account will be present in the user database which acts as default Administrator. The login for this default account is admin / admin (user name / password).

5.6 Editing Library Categories

The SIAM AST organises all supplementary resources uploaded or specified during question authoring in a global library. User of the AST can access these resources from the main menu. When a user uploads such resources, they are asked to select a category into which the respective file or web resource will be placed. In order to prevent duplicates and make sure only sensible categories are

[3] See section 2.2.2

used, users select from a list of predefined categories rather than specify such categories by themselves. However, the “Edit Library Categories” database option allows editing the list of categories which are available for selection during question authoring.

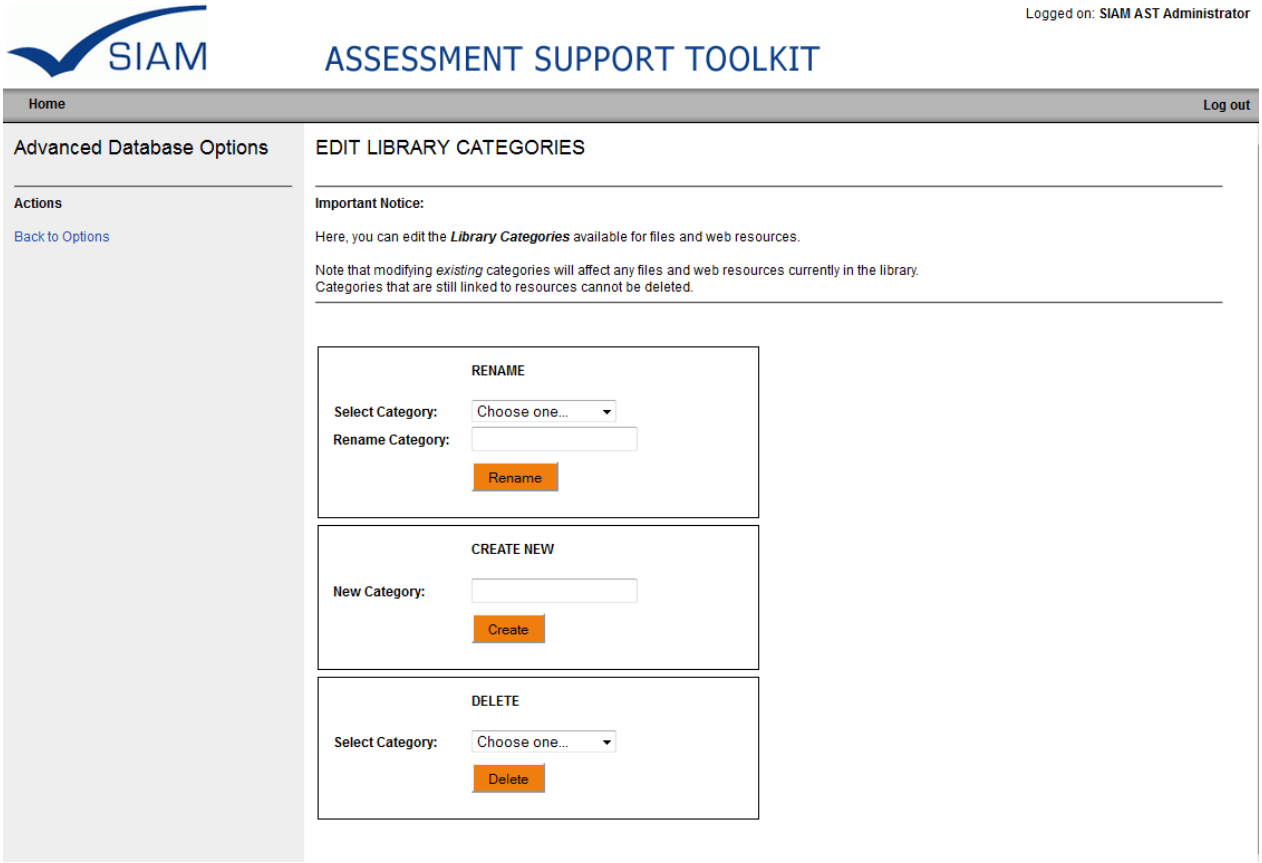

Figure 19: Advanced Database Options - Editing Library Categories

Note that renaming of library categories will take instant effect in any existing assessment cases.

5.7 Editing Task Definitions

In the SIAM AST, distinct *tasks* are used as semantic attributes for assessment questions. In the assessment report, they allow an analysis of the information contributed by different assessment participants with respect to the assessment tasks to which they contribute.

The list of tasks available for the semantic tagging (done during question authoring) can be edited using this advanced database action.

Note that as with all “Editing”-type database options, the renaming of tasks will take instant effect in all existing assessment questions and cases. Newly created task definitions will be available for

new assessment questions which are added after the change. Deleting task definitions is only possible if these are not actively linked to the current pool of questions. The application will perform a relevant check once a deletion is attempted.

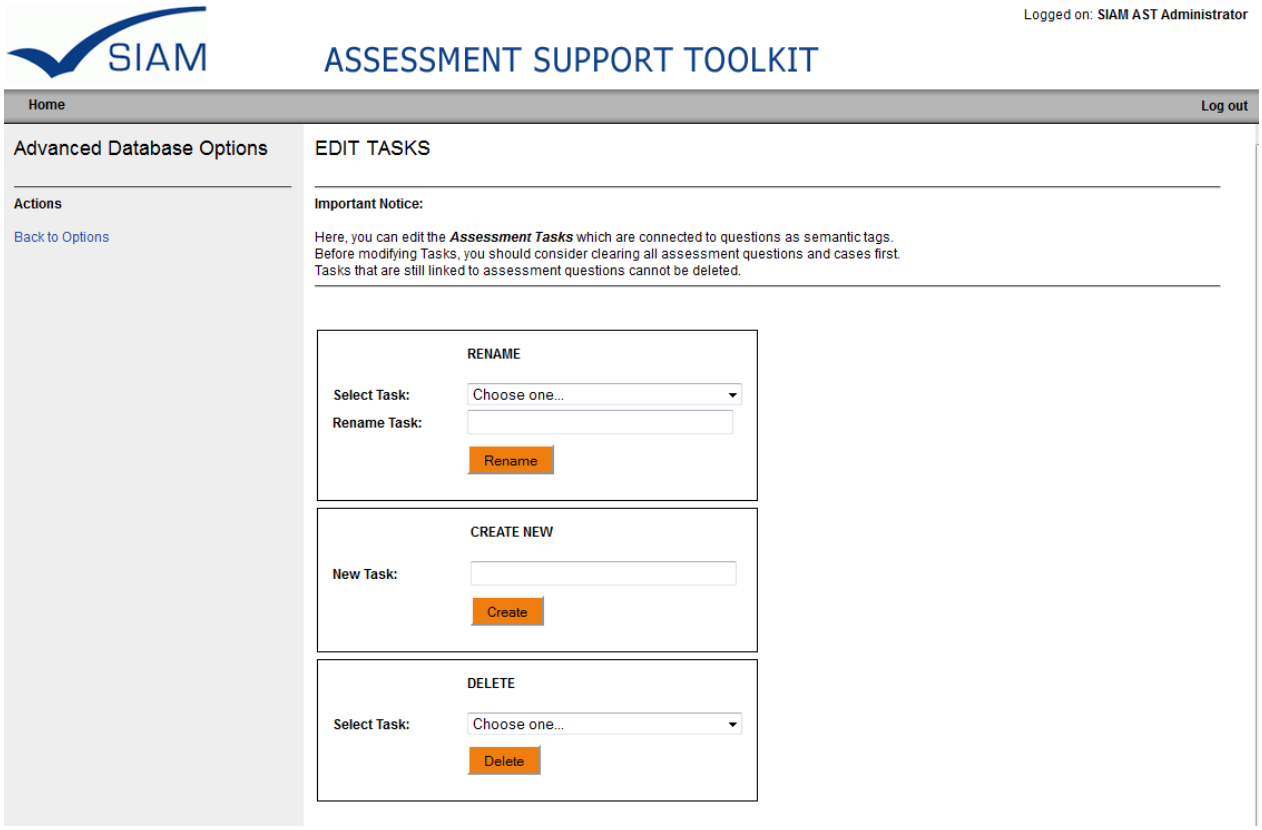

Figure 20: Advanced Database Options - Editing Tasks

The initial task definitions provided with the system are an outcome of the SIAM project and used in its specific set of questions. Note that although it is possible to use more (or less) than the seven pre-defined perspectives for the question pool, doing so has not been thoroughly tested with the toolkit. In our first preliminary tests, no negative effects could be observed, though.

5.8 Editing Perspective Definitions

In the SIAM AST, *assessment perspectives* are used as a secondary semantic attribute (in addition to *tasks*) for assessment questions. In the assessment report, they allow an analysis of the information contributed by different assessment participants with respect to the attributed assessment per-

spectives. The list of perspectives available for semantic tagging during question authoring can be edited using this advanced database action.

Note that as with all “Editing”-type database options, the renaming of perspectives will take instant effect in all existing assessment questions and cases. Newly created perspective definitions will be available for new assessment questions which are added after the change. Deleting task definitions is only possible if these are not actively linked to the current pool of questions. The application will perform a relevant check once a deletion is attempted.

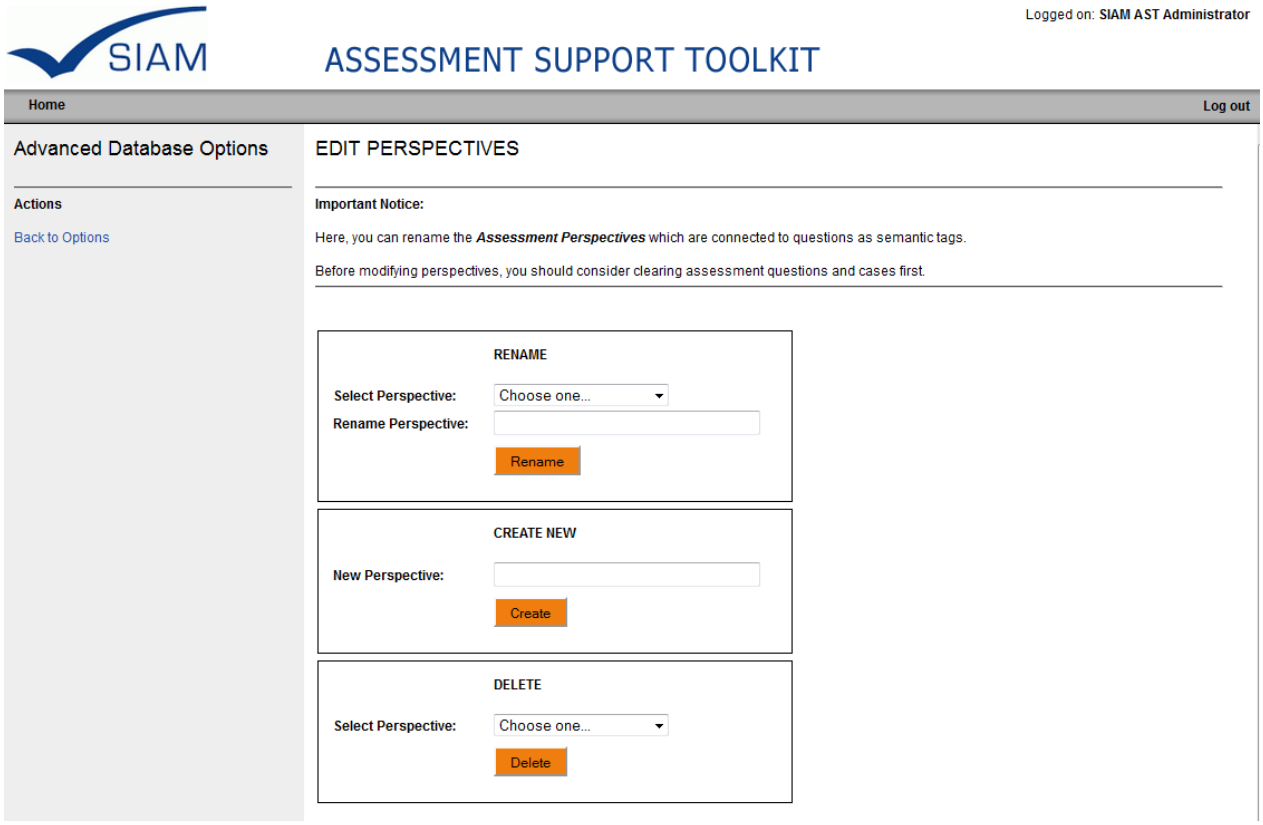

Figure 21: Advanced Database Options - Editing Perspectives

The initial perspective definitions provided with the system are a result of the SIAM project and used in its specific set of questions. Note that although it is in principle possible to use more (or less) than four perspectives for the question pool, doing so has not been thoroughly tested and may not be fully supported by all features of the toolkit.

5.9 Editing Actor Role Definitions

Actor roles play an important part in the information gathering mechanics of the SIAM AST. Roles are associated to individual actors who participate in an assessment case. With respect to the question pool, they determine part of the relevance criteria of screens, such that particular questions can be targeted at actors of a certain role. Eventually, these relevance settings are taken into account in the calculation of assessment scores for reporting.

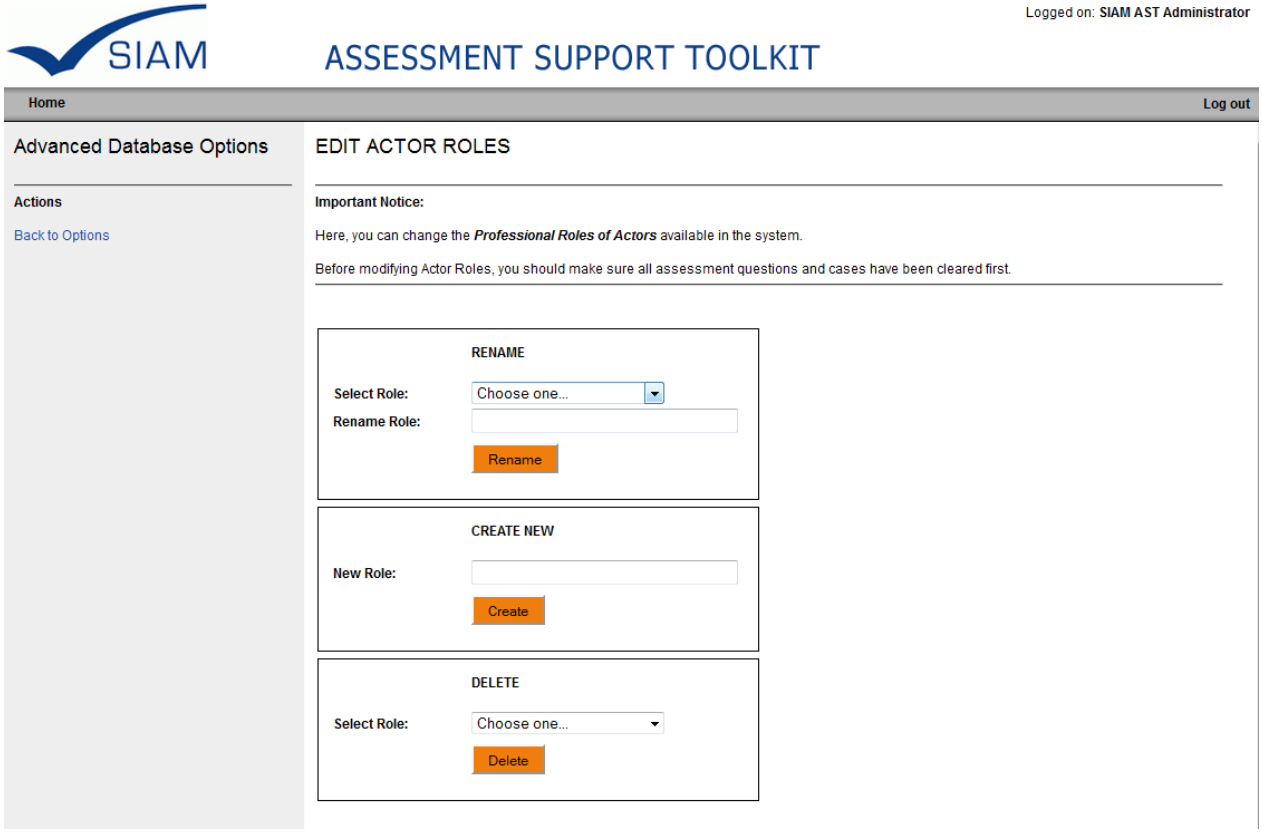

Figure 22: Advanced Database Options - Editing Actor Roles

As with all “Editing”-type database options, the renaming of roles will take instant effect in any assessment questions and cases that already exist when the change is made. Newly created roles will be available for new assessment questions which are added after the change. Deleting roles is only possible if these are not actively linked to the current pool of questions or any assessment cases, respectively.